GENERAL SYSTEMS BULLETIN
VOLUME XXXVI, 2007

THE INTERNATIONAL SOCIETY FOR THE SYSTEMS SCIENCES

http://www.isss.org

Kyoichi Kijima, President
Tokyo Institute of Technology
2-12-1 Ookayama
Meguro-ku, Tokyo, 152-8552, Japan
kijima@valdes.titech.ac.jp

Jennifer Wilby, VP Administration
Bulletin Editor
47 Southfield Road
Pocklington, York, YO42 2XE, England
Email: isssoffice@dsl.pipex.com
Tel: +44(0)1759-302718 Fax: +44(0)1759-302718

Pamela Buckle, Secretary, VP Protocol
Business School, Adelphi University
1 South Avenue, PO Box 701
Garden City, NY 11530-0701, USA
buckle@adelphi.edu

OFFICERS AND UNITS OF THE INTERNATIONAL SOCIETY FOR THE SYSTEMS SCIENCES (ISSS)

ISSS BOARD OF DIRECTORS

KYOICHI KIJIMA, President
Tokyo Institute of Technology, Tokyo, Japan

GARY METCALF, VP Membership and Conferences
InterConnections, LLC, Ashland, KY, USA

DEBORA HAMMOND, Past-President
Cal. State University, Sonoma, CA USA

KEN BAILEY, Board of Trustees Representative
UCLA, Los Angeles, CA USA

JENNIFER WILBY, VP Administration
University of Hull, Hull, UK

LYNN RASMUSSEN, Treasurer and VP Funds
Maui, Hawaii, USA

PAMELA BUCKLE, Secretary and VP Protocol
Adelphi University, Garden City, NY, USA

DAVID ING, VP Communications and Systems Education
IBM, Toronto, Canada

MAURICE YOLLES, VP for Research and Publications
Liverpool John Moore University, Liverpool, UK

SATOMI SEGAWA, VP For Membership and Conferences
Tokyo Institute of Technology, Tokyo, Japan

PAST PRESIDENTS: (Council of Distinguished Advisors)

1956 Origin of the Society
1957 Kenneth Boulding (also '58)
1959 Charles McClelland ('60, '61)
1962 Ross Ashby ('63,'64)
1965 Anatol Rapoport
1966 Peter J. Caws*
1967 John M. Milsum
1968 Milton Rubin
1969 Lawrence Slobodkin
1970 Bertram Gross
1971 Stafford Beer
1972 Margaret Mead
1973 James G. Miller
1974 Gordon Pask
1975 Kjell Samuelson*
1976 Heinz von Foerster
1977 Sir Geoffrey Vickers
1978 Richard Ericson
1979 Brian Gaines*
1980 Robert Rosen
1981 George Klir*
1982 John Warfield
1983 Karl Deutsch
1984 Bela H. Banathy
1985 John Dillon
1986 Peter B. Checkland*
1987 Russell L. Ackoff *
1988 Ilya Prigogine
1989 C. West Churchman
1990 Len Troncale*
1991 Howard T. Odum
1992 Ian I. Mitroff*
1993 Hal Linstone*
1994 J.D.R. de Raadt*
1995 Ervin Laszlo*
1996 Yong Pil Rhee
1997 G.A. Swanson*
1998 Bela A. Banathy*
1999 Peter Corning*
2000 Harold Nelson*
2001 Michael Jackson*
2002 Aleco Christakis*
2003 Kenneth D. Bailey*
2004 Enrique G. Herrscher*
2005 Debora Hammond*

* Denotes Board of Trustees

ISSS COUNCIL

The Council consists of Board members, Trustees, Chairs of SIGs and the following organizational units. The VP for Membership and Conferences is elected by the Council annually.

1. Argentina (ND)
   Charles Francois

2. Australia (ND)
   William Hutchinson

3. Canada, Eastern (C,D)
   H. Ken Burkhardt

4. California, Los Angeles (C)
   Carl Slawski

5. Far West Region (C)
   Open

6. Southern Region (C)
   Janet K. Allen

7. France, Paris (ND)
   Pierre Auger

8. Italy, Milan (C)
   Gianfranco Minati

9. Japan (ND)
   Kazunari Ishidi

10. Korea, Seoul (ND)
    Open

11. Minnesota (C)
    Curt McNamara

12. North European Region (R)
    Kjell Samuelson

13. Poland (C)
    Miecyslaw Bazewicz

14. Saybrook Institute (C)
    Arne Collen

15. Sweden (C)
    Open

16. Brazil (ALAS)
    Ernesto Lleras

SPECIAL INTEGRATION GROUPS
SIG CHAIRS and LIAISON OFFICERS

Business/Industrial Systems Applications (1)
David Ing
sabi@systemicbusiness.org

Hierarchy Theory (2)
Jennifer Wilby
7cnf@dsl.pipex.com

Duality Theory (3) (Open)

Systems Philosophy & Systems Ethics (4)
Nestor Valero-Silva, Nottingham Trent University, UK
nestor.valero-silva@ntu.ac.uk

Systems Modeling and Simulation (7)
Janet Singer
Jsinger@measures.org

Futurism and Systems Change (8)
Curt McNamara curt@scribmail.com

Meta-Modeling and Systems Epistemology (12)
Janet Singer
jsinger@measures.org

Systems Psychology & Psychiatry (13)
Open

Information Systems Design & Info. Technology (16)
Bela A. Banathy
babanathy@sbcglobal.net

Research Towards General Theories of Systems (17)
Len R. Troncale
lrtroncale@csupomona.edu

Medical and Health Systems (19)
Debora Hammond
hammond@sonoma.edu

Living Systems Analysis (20)
James Simms
jrsimms@juno.com

Designing Educational Systems (21)
Patrick Jenlink
pjenlink@sfasu.edu

Spirituality and Systems (23)
Carl Swanson, University of Guam
carl18292003@yahoo.com

Human Systems Enquiry (24)
Arne Collen
acollen@saybrook.edu

Critical Systems Theory and Practice (26)
Jennifer Wilby
j.wilby@hull.ac.uk

Evolutionary Development (29)
Kathia & Alexander Laszlo
info@syntonyquest.org

Systems Biology and Evolution (30)
Len Troncale
lrtroncale@csupomona.edu

Applied Systems and Development (31)
Dennis Finlayson
dfinlayson@btopenworld.com

What is Life/Living (33)
John J. Kineman
jjk@nexial.org

Women and Children (34)
Anne Nelson
nelsongroup@worldnet.att.net

Systems Specific Technology (35)
Vadim Kvitash
kvitash@hotmail.com

Organizational Transformation and Social Change (36)
Maurice Yolles
m.yolles@livjm.ac.uk

Systems Pathology (38)
Len Troncale
lrtroncale@csupomona.edu

Youth SIG (39)
Nicholas Magliocca
nmaglioc@ucsd.edu

ISSS Roundtable
Sue Gabriele
sgabriele@gemslearning.com

LIAISON OFFICERS

IFSR Gary Metcalf and Jennifer Wilby
American Assoc. for the Advancement of Science, AAAS
Section K (Social, Economic, and Political Science)
(Open)
Section L (History and Philosophy of Science) (Open)
Section M (Engineering)
(Open)
Section Q (Education)
(Open)
International Programs,
Dan Radell, Winston-Salem State University
UNESCO (Open)
IIASA (United Nations) (Int'l Inst. for Appl. Sys. Analysis)
Istvan Kiss
American Academy of Management (AAM)
Joe Litterer, Univ. of Massachusetts
European Operational Research Society (EURO)
Peter Pruzan, Univ. of Copenhagen

SECTION ONE
EDITORIALS, PAPERS AND CORRESPONDENCE

INCOMING PRESIDENTIAL ADDRESS
Sonoma, July 2006

Kyocihi Kijima
Incoming President's Speech
Kyoichi Jim Kijima
Tokyo Institute of Technology

It is my great honor to serve as President of the International Society for the Systems Sciences from 2006 to 2007. In using this opportunity, I would like to explain about what I have in mind as my mission, integration in systems research, by referring to the ISSS 2007 in Tokyo, and, then, to introduce the systems research of our team, namely, Decision Systems Sciences.

Integration in Systems Research: My Mission

Though systems research in Japan covers such wide areas as social/organization systems theory, TQC, Kaizen, operations management, control/systems engineering, simulation and modeling, and soft computing (GA, neural network and simulated annealing), it may be fair to say that so far Japanese systems research has been relatively strong at "hard" approaches.

On the other hand, I believe integration/fusion is a strong competence of Japanese culture. It can be found in corporate culture in particular. For example, Toyota, currently the second biggest automobile company, integrates mechanics with electronics to invent sophisticated mechatronics, while Sony proposes a new concept "PC entertainment" by unifying PC, audio-video equipment and games.

During my presidential period, by taking advantage of such Japanese competence, I would like to promote *integration* in systems research. Indeed, the ISSS 2007 in Tokyo is conducted under the conference theme "*Integrated Systems Sciences: Systems Thinking, Modeling and Practice* . Integration in systems sciences may include that of social systems science and engineering, of hard and soft systems research, of theoretical and practical research, of eastern and western systems research, and of formal (mathematical), simulation-based and verbal approaches.

Decision Systems Sciences

I myself have a background in the mathematical General Systems Theory and then have broadened my research scope to advocate Decision Systems Sciences (DSS). DSS tries to tackle complexity or messes involved in decision process in organizations, communities and societies, and their environments, by adopting systems idea in a holistic and integrated way.

One of the characteristics of DSS is that when conducting the research, DSS draws on all of systems sciences from systems thinking and systems modeling to systems practice. Systems thinking promote holism as its primary intellectual strategy for handling complexity in decision situations. Systems modeling aims at describing and analyzing relevant aspects of the situation by constructing a variety of models, including mathematical and conceptual models as well as simulation tools. Systems practice, or practical applications of systems thinking/ideas, is the greatest success of systems science in recent years.

Though DSS covers all the above three phases of the research, it is, in particular, interested in modeling. The “first formal, then verbal” principle is our basic principle in modeling messes in a systems’ framework. DSS claims that when tackling messes, one must first describe the problematic situation as formally or mathematically as possible. It is because by doing so we believe we may obtain non-trivial and deep insights into the decision behavior, which we cannot expect at all by intuitive discussion or superficial observation. To develop and construct innovative models, we are particularly interested in taking into account “soft aspects” of the decision situation like subjectivity, irrationality, credibility, and misunderstanding. Typical examples of research in this line include the mathematical formulation of Ashby’s Law of Requisite Variety, Hypergame analysis of the Gulf war in early 1990s and the drama theory of negotiation.

However, of course, it is clear that there are strict limitations on the capability of formal models in dealing with complexity. For example, it may be rather difficult to investigate interactions among more than three decision makers so rigorously as to produce meaningful findings. Our basic attitude is that we should use formal modeling as far as possible, but if it is impossible, then why not employ a simulation approach. Agent-based simulation tools and generalized Landscape Theory are some of our contributions in this category.

The simulation approach is certainly not almighty, either. When we tackle decision situations involving such high-level messes or complexity, where simulation does not seem to work properly, it is a good idea to accelerate efforts to apply verbal or conceptual modeling. It may include what we call square-and-arrow diagram models and classification frameworks like the SOSM. We have contributed to modifying Soft Systems Methodology according to the Japanese and Asian culture as well as applying them to a wide area of research interests, including education. We have also investigated participatory decision-making processes in a systemic way and have proposed an evaluation scheme for it.

Invitation to the ISSS 2007

ISSS will organize the 51st annual meeting in Tokyo from August 5 through 10, 2007. We welcome submissions of a wide range of papers of high quality, as far as they are relevant to systems sciences. We are more than happy if the contributors could position their research on the map of systems sciences. Then, we can understand they are not just a collection of fragmented bits but structured research results.

Variable-Formality Decision-Making in Artificial Systems

Ron Cottam, Willy Ranson and Roger Vounckx
The Evolutionary Processing Group, Vrije Universiteit Brussel,
Pleinlaan 2, 1050 Brussels, Belgium
+32 (0)2 629 2933; evol@etro.vub.ac.be

Effective and 'correct' decision-making can require application of the entirety of human knowledge and capabilities. Much use is currently made of computers in the process, particularly where its success depends on the assimilation, categorization and ranking of large volumes of data. Unfortunately, the larger proportion of techniques which enable humans to carry out these functions is unavailable or inadequately represented within the formal medium of a digital computer. Major 'red brick walls' which hamper performance in this area are the brute-force nature of data input conversion, the absence of realistic internal representations of external scale, and a lack of sensitivity to the contextual modification of relationships between cause and effect. Although multi-bit implementations of fuzzy logic, of vague sets and contextual variance go some way towards alleviating these problems, fundamental difficulties remain which are irresolvable within purely digital machines.

Conventional computers are absolutely local in their operation. Individual gates which perform the basics of data manipulation are completely isolated from their neighbors, except for pre-specified communication paths which were laid down during the diffusion, poly-Si and metallization stages of their chips' fabrication. The operation of entire processing chips, consisting of some tens or even hundreds of millions of gates, is synchronized by a central 'system clock', whose ostensible purpose is to make everything 'happen at the right time', but whose primary effect is to remove any global-to-local influences on individual gates. The result, somewhat surprisingly, is that what we treat as a 'system' is *very* far from being one: in its logical representation, a computer *does not exist* as a unified entity [1]. Even more surprisingly, this is *the* most common characteristic throughout the world of 'systems': apart from those which are directed, controlled or mediated by human intervention *there are no systems*!

System identity presupposes some kind of unification: the 'systems' we often describe do not 'possess' any. Far from being an abstract and irrelevant grumble, this conclusion is *vital* to the universe of system sciences. We need to re-evaluate exactly what we are talking about if we are to avoid being irrelevant to society. All systems, if such is to be a correct description, are unified through quantum entanglement. Either this is carried out internally, which corresponds closely to their categorization as 'living organisms', or it is performed indirectly from outside [2]. The example of a digital computer is an excellent one. Computers spew out numbers in binary code, where we interpret 'bits' of the code with respect to where they appear in a 32-bit sequence, for example. The binary string '10000' implies (1x16)+(0x8)+(0x4)+(0x2)+(0x1) = '16' in decimal representation. But where *we* recognize that the '1' in '16' has a greater significance than the '6', a computer has no conception *at all* about this (or, indeed, about anything else!). The only place where any sense of meaning is applied to its outputs is *in our minds*. Little effort is needed to extend this point of view to the entire range of human endeavor, and to the assimilation, categorization and ranking of data during any decision-making process in our current context. Much as we would like our computers to do much of the donkey-work for us and tell us what we need to know, if we accept willy-nilly what they tell us we are likely to finish up the creek without a paddle!

All this is not to say that digital computers are worthless, but it implies that we would do well to keep them in their place, and limit their incursions to those areas which are divorced from criticality in decision-making. Much is made of the future possibilities of Artificial Intelligence, but this is an oxymoron – either intelligence is real, or it does not exist. In its most usual guise, AI appears in digital computers, where the preceding arguments of this Note destroy its unity [3]. Digital computers are constructed to be absolutely precise and accurate in what they do, and they usually achieve this, notwithstanding the ever-present risk of 'system crash' – itself a result of the insistence on 'local' supremacy rather than 'global' correlation. We should use them *only* where they perform better than

we can, for example in remembering, in mathematics, in searching, in short in the operations where formality rides high.

But where do we go from here? Can we progress towards computational engines which will rival our success in dealing with unforeseen circumstances, with the creation of new solutions to problems, with the feeling in an apparently obvious context that "all is not well in the state of Denmark"? An old (now) engineering professor once advised students that "if it looks right, it should be OK; if it doesn't, watch out!". Can we persuade our 'systems' to become systems? And how? Simplistically, can we insert our 'systems' into the category of 'living organisms', much as Robert Rosen apparently believed was possible [4]?

For some years now, research has been ongoing to develop solid state devices which can be directed to exhibit either digital or analog performance. The intended purpose is to simplify the construction of heterogeneous chips which include both digital and analog circuitries, but another application beckons. In 1993 these authors published the preliminary design for a multi-scalar decision-making processor whose operation would resemble that of an organism's response to environmental threats [5]. This requires a computational phase space within which the threshold of quasi-neurons changes continuously between the classical formality of *data-destructive* decision-making and the massive parallelicity of quantum-mechanical-like *data-preserving* 'comparison-of-outcomes'. It is not difficult to see that the interface between these two characters is precisely the role we play with respect to the 'systems' we develop. Computers are excellent at 'pure' decision-making, but far from useful in the contemplation of multiple outcomes or in the associated domain of pattern recognition.

So, maybe, here is the way forward, the way in which we can begin to "insert our 'systems' into the category of 'living organisms' ". But we should first think very carefully whether, and how, and to what extent we should let the genie of autonomy out of the bottle. Is the future possibility of 'living systems' a frightening one? Or should we be more worried about unthinking, uncaring locally-constrained digital 'systems' being pushed even farther into the realm of complexity than their current application to Air Traffic Control, where systemic indeterminacy is beginning to raise its ugly head?

[1] Cottam, R., Ranson, W. and Vounckx, R. (2004). "Back to the Future: Anatomy of a System." In Dubois, D. M., ed., *Computing Anticipatory Systems: AIP Conference Proceedings 718*. AIP: New York, pp. 160-165.

[2] Cottam, R., Ranson, W. and Vounckx, R. (2005). "Life and Simple Systems." Systems Research and Behavioral Science 22, 5, 413-430.

[3] Cottam, R., Ranson, W. and Vounckx, R. (2006). "Hyperscale puts the *sapiens* into *homo*." In publication as an invited paper to the Journal of New Mathematics and Natural Computation.

[4] Rosen R. (1991). *Life Itself: a Comprehensive Enquiry into the Nature, Origin, and Fabrication of Life*. Columbia UP: New York.

[5] Langloh, N., Cottam, R., Vounckx, R. and Cornelis, J. (1993). In Smith, S. D. and Neale, R. F., eds., *ESPRIT Basic Research Series, Optical Information Technology*. Berlin: Springer-Verlag, pp. 303-319.

A Chaos Theory Approach to Systemic Change
Charles M. Reigeluth

The process of transforming a school system is highly complex and difficult to predict or control. Chaos theory (Kellert, 1993; Wheatley, 1999) was developed to help understand highly complex systems. It recognizes that beneath the apparently chaotic behavior of a complex system lie patterns that can help one to understand and influence its behavior. Some of the key features of chaos theory are described next.

Co-evolution. A system changes in response to changes in its environment, and its environment changes in response to its changes. As we evolve deeper into the information age, the need for co-evolution in education has become ever more urgent (Banathy, 1991).

Disequilibrium. Co-evolution is fostered by disequilibrium, which Prigogine characterized as the necessary condition for a system's growth.

Positive feedback provides information about opportunities for a system to change the goals it pursues. Thus, it helps a system to co-evolve with its environment. Often it takes the form of perturbances.

A **perturbance** is any change in a system's environment that causes disequilibrium in a system.

Transformation. Disequilibrium makes a system ripe for transformation, which is reorganization on a higher level of complexity. Transformation occurs through a process called "emergence," by which new processes and structures emerge to replace old ones.

Fractals and "strange attractors." Transformation is strongly influenced by "strange attractors," which are a kind of fractal (Wheatley, 1999). Fractals are patterns that recur on all levels of a system. In educational systems, they are "core ideas" and values or beliefs (Banathy, 1991, 1996) that characterize the system. These recurring patterns strongly influence, and are influenced by, complex system dynamics and structures (Senge, 1990). One example of a fractal in education is autocratic control. On the district level of an educational system, the school board typically controls the superintendent, who controls the principals. On the building level the principals control their teachers. And on the classroom level the teachers control their students. Another example is uniformity or standardization, and there are many other fractals that characterize our factory model of schools.

A strange attractor is a kind of fractal that has a powerful influence over the processes and structures that emerge in a system undergoing transformation. One example in education is empowerment, which entails providing both the freedom to make decisions and support for making and acting on those decisions. On the district level this takes the form of the school board and superintendent empowering each building principal to experiment with and adopt new approaches to better meet students' needs and to make other important decisions (hiring, budgeting, etc.). On the building level the principal empowers each teacher to experiment with and adopt new approaches to better meet students' needs and to participate in school policymaking and decision making. On the classroom level the teacher empowers each student to make decisions about how to best meet her or his needs. Other examples of strange attractors include customization/differentiation (or diversity) and shared decision making/collaboration.

To become an effective strange attractor for the transformation of a school system, the core ideas and values (or beliefs) must become fairly widespread cultural norms among the stakeholders most involved with making the changes. Once this happens, very little planning needs to be done for the transformation to take place. Appropriate behaviors and structures will emerge spontaneously through emergence and self-organization.

Self-organization. Self-organizing systems are adaptive; they evolve themselves; they are agile (McCarthy, 2003). They require openness, self-reference, and freedom (Wheatley, 1999). To be

open with its environment, a system must actively seek information from its environment and make it widely available within the system. Self-reference refers to the ability to remain consistent with the core ideas, values, or beliefs that give the organization an identity. Freedom for people to make their own decisions about changes, as long as it is guided by sufficient self-reference, will allow changes to occur before a crisis point is reached in the system, thereby creating greater stability and order.

Chaos theory can help us to understand when a system is ready for change and the system dynamics that are likely to influence individual changes and their effects, as well as to understand and improve the transformation process as a complex system. It tells us that we cannot hope to *control* the transformation process, but we *can* hope to influence the process through the use of strange attractors and leverage points, and that we must constantly adjust and adapt the process to the emerging, ever-changing reality of a particular educational system and its environment.

Chaos, Rigidity, and Complexity and their Changes Caused by Environmental Influences

Manfred Doepp and Gabriele Edelmann
Holistic DiagCenter
52 Buchbichl, D 83737 Irschenberg
Germany
info@diagcenter.de http://www.diagcenter.de

If more than 500 biological dates which were collected by means of a randomized procedure exist, a frequency distribution analysis is worthwhile. The dates can be derived from systems of the organism or can be produced by groups from sociological or psychological investigations. Groups' behaviour forms an analogue to a human organism and the core beliefs and ideologies of groups resemble the subconscious autonomous systems of the organism.

We measure routinely the skin resistance values of the 12 classical meridians [9] (left and right = 24 dates/person) and we use the reactions to about 80 varying medicines as coincidence influence so that over 2.000 digital dates/person result. After that a frequency distribution analysis with an approximation of the distribution by a Chi square- and a Kolmogorov-Smirnov analysis is performed, both comparing with a log-normal = order (in figure 1, red) and a standard = Gaussian = chaos (green) curve [1, 5, 7, 10, 11].

We distinguish five typical results of the analysis [2]:

1) chaos (coincidence)
2) chaotic tendency (lability)
3) Golden Cut (health)
4) rigid tendency (order)
5) rigidity (fixation)

The five groups correspond to typical abnormalities and to illnesses:

1) Self-aggression, chronic fatigue-syndrome, and cancer (entodermal)
2) Allergy and neurosis
3) Health and regulation-unimportant illnesses like infections
4) Strong stress, high tension, multiple sclerosis, and over-acidification
5) Arterial sclerosis, M. Parkinson, endogenous depression, and anankasm

A Retrospective Evaluation

In our energy-diagnostic department we noticed in the last years cases with irrational stimulus-reaction-patterns and with a chaotic or rigid regulation state of the autonomous systems more frequently. We found a possible explanation in the Switching-phenomenon. In addition to former results a new cause came into the discussion, it is the electro-smog-exposure. We used three criteria in order to clarify the discoveries: A) a negative reaction to a pulsating magnetic field, B) a positive reaction to a brain synchronization procedure, and C) frequency distribution analysis models of skin resistance values. A retrospective evaluation about 4 years (435 patients) divided into 2 groups (2002/2003 vs. 2004/2005) was carried out, it found themselves 1) a discrepancy between results before and after the synchronization procedure B), and 2) a positive relationship between the criterion A) and a chaotic inclination in C). So the suspicion arises conc. an electro-smog-induced polarization of systems [3] inside the organisms in our population.

Concerning the term 'synchronization procedure': a massage of the own eye brows performed with crossed arms for about 40 seconds. It is able to resynchronize a 'switched' central nervous system. Switching means that conscious and subconscious parts are no more associated but are working separately. The result is a 'cool' person with apparently normal intellect, however, no entry to the emotional parts of the brain. If such a person receives questions (by methods of the energetic and information medicine) the answers will be paradoxical. A similar and known situation is a dependency to an agent which harms the person. The agent may be an exposure to electromagnetic waves, too.

Examples

Which are further tendencies during the course of the last years? In the first years of these investigations (1998 to 2002) most persons showed a single distribution peak (figure 4), since then many persons have, however, 2 to 5 tops which refer to a fragmentation of the regulatory status.

In addition extremes are frequent now, more and more results are chaotic and/or rigid, the central peak of the Golden Cut becomes a rare result.

Theoretical Considerations

A person that is in harmony and with a normal health state shows a Golden Cut-Distribution. It is a dynamic equilibrium, which means that it moves itself between a chaotic and a rigid tendency, according to the life situation. If there is a requirement for a high performance, the adrenaline climbs and a log-normal distribution will turn out. If a rest is necessary and possible, the adrenaline declines and a Gaussian distribution tendency will result. A person with a distribution pattern like this is able to react on every demand in a moderate and adequate way. Concerning regulations and psychologically this person will not be either an anarchist or a fundamentalist.

The disadvantage of this harmony is, however, that hardly a mental evolution occurs firstly concerning the individual and secondly concerning the society. In the history of mankind and all nations harmonious times are exceptions, in reality often a pendulum oscillation can be described between the two extremes of chaos and of rigidity.

It seems that presently we are entering a phase of changes again. It corresponds to the physicists' knowledge that life occurs at a laser threshold between entropy and neg-entropy which never means stability or even a safety [4, 6]. The non-linearity of a deterministic chaos as a characteristic of life in nature [8] seems to be predominant in our societies, too.

Discussion

The developments in the last years were: an increasing negative effect of electromagnetic waves, an increasing positive effect of a brain synchronization procedure, and a chaos tendency in the distribution histograms combined with fragmentation and de-synchronization of the regulation systems. The three changes are correlated to each other. These effects seem to be produced by

the no more continuously, but exponentially ascending technical electro-smog exposure. The environment of this world becomes cleaner concerning chemical agents, however, more polluted by waves and rays. All over the world the behaviour to use mobile phones regularly at the ears – close to the brain - has become the same. Wireless communications instead of the old telephones have become part of the normal way of life. This aspect may not be responsible for diseases like cancer, but produces an obvious change in the regulation abilities of the individuals.

Chaos and rigidity are not good or bad per se. In fact both have advantages. A chaos is creative, it allows modifications, it ends states of a pseudo-harmony. Rigidity admits to arrangement, it allows to concentrate onto special issues and tasks and to stabilize the society. The advantage of a further elongation of the pendulum is a higher rate in the evolution of the mankind, and is an acceleration of the mental evolution of the people. The complexity grows.

On the first view both, chaos and rigidity are enemies of a complexity, as it is combining tendencies and not extremes should be contained. After an era of slow and broken developments after the 2nd world war an acceleration, however, which is granted by fast and wide movements of the pendulum may take place. Also the globalization and the IT-revolution are important influences concerning that. The world has become a township and we are entering the steep phase of an evolutionary e-function. Stabile states are substituted by permanent and increasingly faster variations and developments.

If we accept this, the meaning of the results is important for the sociology, too. Maybe we must use a wider concept of complexity that implies the extremes that for example the anarchist as also the fundamentalist contains.

Conclusion

Our analysis results of patients from Central Europe represent individual conditions. In the statistical evaluation and over some years, however, they allow the discovery of certain developments in the European society. One reason for that seems to be the ascent of the exposure of our population on electromagnetic waves resulting in a chaos tendency in the central nervous system. This means an increased necessity towards a wider understanding of complexity including chaos, rigidity, and fragmentation. This kind of synthesis should be widely accepted in order to avoid conflicts and wars in the evolutionary (or revolutionary) time to come. The integration of extreme positions instead of fighting them will become a decisive task.

References

[1] Doepp, M., Edelmann, G.: Clinical evaluation of the frequency distribution analysis of biological data, Erfahrungsheilkunde, 12, 2003, pp. 818-824

[2] Doepp, M., Edelmann, G., Chaos in human being: an aid for medical decision making. WSEAS Transactions on Biology and Biomedicine, 4, 1, 2004; pp. 403-409

[3] Doepp, M., Edelmann, G., The switching of the brain as an addiction-like condition: interference of the meridians by electrosmog? AKU 30, 3, 2002; pp. 133-139

[4] Feigenbaum, M. J., Quantitative universality for a class of nonlinear transformations, Journal Statistical Physics, 19, 1978; p. 25

[5] Gebelein, H., Heite, H.-J., About the imbalance of biological frequency distributions, Klin. Wochenschrift, 28, 1950; p. 41

[6] Haken, H., A nonlinear theory of laser noise and coherence, Zeitschrift für Physik, 181, 1964; pp. 96-124

[7] Popp, F.-A., New horizons in medicine, Haug, Heidelberg, 2nd ed. 1987

[8] Prigogine, I., Stengers, I., Dialog with the nature - New Ways of Scientific Thinking, Piper, Munich, 1981

[9] Rossmann, H., Popp, F.-A., Statistics of the electro-acupuncture according to Voll, Ärztezeitschrift für Naturheilverfahren, 1, 1986; pp. 51-59, and 9, 1986; pp. 623-630

[10] Sachs, L., Statistical evaluation methods, Springer, Berlin, 1969

[11] Zhang, Ch., Popp, F.-A., Log-normal distribution measure of physiological parameters and the coherence of biological systems, pp. 102-111, in: Zhang, Ch., Popp, F.-A., Bischof, M. (eds.), Current Developments of Biophysics, Hangzhou University Press; 1996

Cybersemiotics: Why Information is Not Enough
Soren Brier

Cybersemiotics: Why information is not enough will be published by University of Toronto Press in the spring of 2007. In the foreword we read that what information, cognition, communication, intelligence and meaning are, is a very old philosophical problem. Later it reappeared in the attempts to create psychological and communicative sciences. But today these questions, since Shannon's information theory and Wiener's cybernetics, are formulated in the trans-disciplinary context of computers, information systems, and ultimately the Internet.

Understanding Computers and Cognition from 1986 is a famous book by Terry Winograd and Fernando Flores that illustrates the complexity of these areas as it deals with the technological design of computers and information systems in the light of theories of animal and human cognition and communication, including the autopoiesis theory of Maturana and Varela as well as speech act theory and pragmatic linguistics. This book was an important inspiration for his dissertation *Information is SilverÉ* (Published in Danish in 1994).

The present book goes further as it is an inter- and trans-disciplinary philosophy of science project analyzing the modern attempt to find a foundational unified conceptual framework encompassing the complex area of information, cognition and communication science, and semiotic scholarly studies often referred to as information science.

The present work provides an interpretation of the type of "information science" research programs that unified information science can offer, and what is needed to supplement present approaches. As such, the book is part of the Foundation of Information Science (FIS) research program asking if there can be a trans-disciplinary information science encompassing the technical, natural and social sciences as well as the humanities, in its understanding of understanding and communication, a vision that originally came from Norbert Wiener in *Cybernetics; or Control and Communication in the Animal and the Machine* . But it also stems from an interest in the development of Konrad Lorenz and Niko Tinbergen's attempts to make a science of ethology, which was neither mechanistic nor vitalistic. Wiener's book and cybernetics are often explained as dealing with "scientific explanation of the relationship between animal thought processes and learning devices", which is one of the reasons why ethology and its ongoing discussions with comparative psychology, and not least Skinner's behaviorism, is relevant here. Also because these discussions – among other things – lead Miller, Gallanter and Pribram in 1960 into the formulation of the foundation of cognitive science in their book *Plans and the Structure of Behavior.* But it is well known that cognitive science's information processing paradigm, which in many ways is a modern version of Wiener's cybernetic dream, has severe problems with the role of embodiment in cognition, understanding, and communication as for instance Hayles points out in her analysis in the profound book *How we became posthuman: Virtual Bodies in Cybernetics, Literature and Informatics.* Within pragmatic linguistics Lakoff and Johnson's embodied cognitive semantics and Wittgenstein's language game theory especially useful to connect body-hood, culture, and signification. But since both ethology and biology in general – as well as cybernetics/computer science – have problems with the concept of meaning, subject and consciousness, a reformulation is done using certain aspects of a biosemiotics based on C. S. Peirce, T. Sebeok, J. Hoffmeyer and C. Emmeche to understand the role of embodiment in cognition and communication.

This book aims to formulate a new trans-disciplinary framework based on Peirce's semiotics, second-order cybernetics, Luhmann's systems theory, cognitive semantics, and language game theory to solve some of the trans-disciplinary conceptual problems in the founda-tion of cognitive science, since cybernetics is one of the original contributors to modern information and communi-cation science. Tthis trans-disciplinary framework is called Cybersemiotics.

In the first part of the book the essence of some present mainstream approaches and theories are analyzed; not to criticize specific researchers or theories, but to characterize the viable results of research programs and paradigms and point out their limitations and unsolved problems. In the second part theories and frameworks that conceptualize these problems and present solutions are discussed.

Each analyzed theory is acknowledge for the progress in knowledge it has made. The beste best possible use of each is done, and it is incorporated them into the new framework in order to bring us a step forward. Reviewing these approaches illustrates where too-radical solutions did not accomplish their tasks. These analyses serve as arguments for other possible solutions. The useful components are placed in a new framework, and renamed to evoke new meanings emerging from the totality of the new framework.

This process acknowledges that science grows through collaborative processes and suggests how different paradigms can fit their work into a mutual trans-disciplinary framework. It is exemplified through the practical consequences of this framework for two subject areas:

The first deals with the problems of conceptualizing cognition and communication in a way compatible with the conceptual framework of both the sciences and the phenomenological aspects of psychology and further with the social sciences, especially linguistics, that were previously considered specific to humans. Here biology and the attempts to understand the connection between life and cognition with the ethological paradigm as an example become central.

Second, practical consequences for Library and Information Science (LIS)is pointed out, with special focus on the problems of indexing electronic scientific documents for subject searching based on the semantic interpretation of texts for diverse user groups, for instance, on the Internet and management information systems . During the past 20 years it has become increasingly clear how important this area is for all exchange, storage and retrieval of human knowledge in computers. It has also become increasingly obvious that in order to function optimally, LIS must be based on a theory of cognition, information and communication that bridges technical science, cognitive science, communication science, and linguistics, including the phenomenological, social and cultural aspects of the understanding and interpretation of signs.

This postdoctoral dissertation was successfully defended March 6th, 2006 at the Copenhagen Business School and a new transdisciplnary framework thereby recognized.

Algorithm to Measure Symmetry and Positional Entropy of N Points

Dennis G. Collins,
URB. Mayaguez Terrace, 6009 Calle R. Martinez Torres,
Mayaguez, PR 00682-6630
and Dept. of Mathematics, University of Puerto Rico,
Mayaguez, Box 9018, Mayaguez, PR 00681-9018

A method and algorithm is given to measure the symmetry (SYM= global symmetry) of n points. No other attempt to do this task is known at present, as all known present methods to describe symmetry break into different incomparable cases according to the kind of symmetry (mirror vs rotational and so on). The algorithm is based on counting the number of "elementary symmetric recognition acts," or having two distances d(A,B) and d(C,D) be equal within a given tolerance t. The same algorithm can be adapted to measure "un-normalized positional entropy deficit" (=UPED) and positional entropy of n points. These (SYM and UPED) quantities represent a "missing link" or "holy grail" (of a minor sort) connecting symmetry with order/disorder with entropy, since for small occupation numbers (1<=k<=4) they come out almost the same. Here the occupation number k is the number of equal distances in the figure for a given value d. The algorithm can be added via software to imaging devices, such as computer graphs programs or cameras to solve problems of defect detection, say in gems, or object detection. It should contribute to improved symmetry applications similar to the introduction of interchangeable parts in manufacturing, since any figure has the same symmetry measure in any setting, and any two figures can be compared as to their symmetry. The program can be expanded to cover the case of similar figures through calculating ratios and cases of graph theory by working with a partial set of distances.

Typically symmetry is handled on a piece-meal basis, by working with translational or mirror or rotational symmetry through the location of symmetry axes or centers, which must be calculated separately for each case. Mathematically, this procedure can lead to the complicated construction of various symmetry groups as outlined by Jablan (1995). Attempts to work with partial symmetry have led to even more complicated mathematical structures such as groupoids (cf. Weinstein and Johnson).

An earlier attempt to measure symmetric order by the author, which agrees in simple cases with the present method, is covered in Collins, 2005, which gave the definition of "tropical" symmetric order as "number of equal distances from each object, added together. The first (reference) distance does not count . .. " It was found that working with reference distances could be avoided by counting number of pairs of equal distances, since one reference distance plus one equal distance counts as one pair of equal distances.

As stated in the article by Reid (2006) most imaging problems can be solved at present by "proper knowledge, hardware, software, and tweaking…"(p.18). It remains to be seen whether the new approach described here changes the way symmetry is done or represents an alternate curiosity, much as the rotary (Wankel) engine.

Alexander (2002) counts the number of "local symmetries" (p.189); however this method appears to be infeasible (take exponential complexity) for large n since it involves considering all subsets, plus there is no indication of how to count local symmetries in more than one dimension.

The term "distance entropy" occurs with respect to the "distance transform" in the work by Kia; however the terms refer to different calculations from this algorithm, involving edge effects.

Algorithm

Supposing n points are inputted in coordinate fashion in any dimension, the algorithm first calculates the set of n*(n-1)/2 pairs of distances. Then it calculates local symmetry by ordering the distances from each given point and checking how many of them are the same within the tolerance, and adding over all points. Then it calculates global symmetry (= SYM) by considering (flattening) all distances

into one set and ordering them, eliminating every other one since d(A,B) = d(B,A), and again checking how many distances are the same within the tolerance t. From the resulting occupation numbers k, either the total SYM can be calculated by adding k*(k-1)/2 over each k>1,or UPED can be calculated by adding k*ln(k) over each k>1.

The positional entropy can be calculated by

$$\ln((n*(n-1)/2)\text{-UPED}/(n*(n-1)/2).$$

This quantity corresponds to a discrete Shannon entropy.

"Order" is seen as seams of concentrated equal distances, somewhat like seams of ore in a mountain, which subtract from the maximum disorder ln(n*(n-1)/2). The normalized positional entropy deficit is UPED/(n*(n-1)/2). A reason for working with UPED versus the normalized quantity is that if random points are added (that contribute no repeated distances) the UPED stays the same, whereas the normalized quantity decreases, somewhat as the ratio of ore to mountain depends on the size of the mountain.

To find "seams" of similar figures (versus congruent figures as sought above), it is necessary to add another step of "refining the ore" by calculating the ratios of all the n*(n-1)/2 distances. Similar figures will show up as concentrations of ratios, for example if one figure is twice as large as another, the ratios of corresponding sides will show up as a concentration of 2's (k>1 for r=2) in the set of all ratios.

A Mathematica program can be developed, which calculates local symmetry, global symmetry (=SYM= symmetry) and un-normalized positional entropy deficit (UPED), and positional entropy of n points. The program also calculates ratio symmetry distributions, from which ratio versions of above quantities can be calculated by adapting previous program statements. The program, for which the author is applying for a patent, depends on the "Flatten" and "Sort" commands.

Remark: Another application of these commands is a very simple version of the probability centrifuge algorithm (Collins patent 2005). In this application the probability centrifuge algorithm of a multidimensional set is carried out by flattening the set of function values, then sorting it, then interpolating and integrating it. It is only necessary to contract the x-axis of the one-dimensional set by the integral value to obtain a probability centrifuge density (with integral value 1).

For many simple geometric figures, which is to say figures for which occupation numbers k are between 1 and 4, the two functions, k*(k-1)/2 and k*ln(k) are nearly equal. Thus for this case symmetry and un-normalized entropy deficit will be nearly equal, which provides a link between order as measured by symmetry and order as measured by un-normalized entropy deficit. It remains to be seen which function will prove to be more valuable in applications; the algorithm calculates both quantities.

SYM calculates the same symmetry measure for a figure and its mirror image, and for a figure and its (unrotated) translation, whereas UPED calculates somewhat different values.

The algorithm can be applied to recognition and defect detection problems. The symmetry of the template together with another template can be calculated and compared with the symmetry of the template together with the (possible defective) example. The symmetry of the double template represents a local maximum of symmetry, such that any (relatively minor) change in the example will significantly decrease the combined symmetry of the template with example, indicating a defect.

There is also an application to industrial positioning problems, as well as lock-and-key type fits involved in olfactory recognition and protein folding. The symmetry goes way up when a proper fit is obtained; the ratio of the final symmetry to the sum of the symmetries of the components may be termed the "synergy" of the fit (Corning, 2005).. This synergy may also represent a source of the "generative transformity" (Giannantoni, 2002) of order as created by biological evolution, architecture (Collins, 2006), building, manufacturing and so on, as developed by H.T. Odum..

Examples can show how “refining the ore” by calculating C(n*(n-1)/2,2) ratios (>=1) and studying their occupation numbers permits detection of similar figures.(at different scales).

An apparatus based on the algorithm would allow the user to enter sets of points, either directly or by manipulating input images, then move the sets around by currently-available graphics commands, and calculate the resulting symmetry in real time by the algorithm to solve recognition, defect and positioning problems.

Examples

1) n=6 L={ {0,0},{0,0},{0,0},{0,0},{0,0},{0,0}} All points same (Max. order)

SYM=(15*14)/2=105 UPED=15*ln(15) = 40.62

2) n=6 L={ {0,0},{1,0},{1,1},{3,0},{4,0},{4,1}} Triangle and translated triangle (3 units to right)

SYM=11 UPED=4*ln(4) + 2*2*ln(2) +3*ln(3)=11.61

3) n=6 L={ {0,0}, {1,0},{1,1},{3,0},{4,0},{3,1}} Triangle and reflected triangle

SYM=11 UPED=4*ln(4)+5*2*ln(2)=12.47

4) n=6 L={ {0,0},{1,0},{1,1},{3,0.7},{4,0.7},{3,1.7}} Triangle and reflected triangle glided up .7

SYM=9 UPED=4*ln(4)+3*2*ln(2)=9.70

5) n=6 L=pentagon with point in center

SYM= 30 UPED=3*5*ln(5)=24.19

6) n=6 L=hexagon (circle with 6 equally-spaced points)

SYM=33 UPED=2*6*ln(6)+3*ln(3)=24.79

7) n=6 L={ {0,0},{1,0},{1,1},{0,0},{1,0},{1,1}} Double triangle

SYM=40 UPED=25.47

8) n=6 L= ellipse with 2 points on major axis (determined by squashing circle)

SYM=15 UPED=2*4*ln(4)+3*2*ln(2)=15.24

9) n=5 L= hexagon with missing point (or n=6 including one point randomly off circle)

SYM=13 UPED=4*ln(4)+3*ln(3)+2*ln(2)=10.22

10) n=6 L= random points (no repeated distances) SYM=0 UPED=0

11) a) n=5 L1={ {0,0},{1,0},{0,1},{0,2},{1,2}} SYM=9 UPED = 9.704

b) n=4 L2={ {1,1},{2,0},{2,1},{2,2}} SYM=4 UPED = 4.682

c) n=9 L=L1 union L2 = { {0,0},{1,0},{2,0},{0,1},{1,1},{1,2},{0,2},{1,2},{2,2}}

SYM=138 UPED = 75.226

SYM SYNERGY= 138/(9+4)= 10.61 UPED SYNERGY=75.226/(9.704+4.682)=5.23

FORMULAS for n points (gif(x)=greatest integer less than or equal to x)

1) max local LSYM = n*C(n-1,2)=n*(n-1)*(n-2)/2

2) max global SYM= C(C(n,2),2)= (n+1)*n*(n-1)*(n-2)/8

3) row of points local Lrow = gif(n/2)*gif((n-1)/2)= n*(n-2)/4 if n even and (n-1)*(n-1)/4 if n odd

4) row of points global Row = n*(n-1)*(n-2)/6

5) ring of points local Lring =n*gif((n-1)/2)

6) ring of points global Ring = gif(n/2)*gif((n-1)/2)*((3n-1)/2 – gif(n/2)) =

(n - 1/2)*Lrow(n) if n even and n*Lrow(n) if n odd

7) hypercube of n=2^m points local Lhyp = n*Sum[Binomial[Binomial[m,k],2],{k,1,m-1}]

= ((2^m)/2)*(-2^m+ (4^n)*Gamma[m+ Ω] /(Sqrt[Pi]*Gamma[m+1]))

8) hypercube of n =2^m ponts global Hyp = Sum[Binomial[(2^(m-1)) *Binomial[m,k],2],{k,0,m-1} =(2^(-2+m))*((1/2)*(2 - 3*2^m + (2^(-1+3m))*Gamma[m+1/2]/(Sqrt[Pi]*Gamma[m+1]))

Remark: Formulas 3) are the "multiplication mountain" or ladder numbers, which can be applied to simplify the multiplication table (cf. Collins unpublished manuscript).

Cases

Icosahedron (12 points, 20 sides) global SYM = 885 (local 240) (affected by 60 deg resonance)

Duodecahedron((20 points,12 sides (pentagons)) global SYM = 4455 (local 720)

Empty squares with n=4*(m-1) points and solid squares with n= m*m points are affected by "Pythagorean" Resonances (such as 9+16=25).

Dim m	Points n	Lemptysq	Emptysq	Points n	Lsolid sq	Solidsq
0	0	0	0	0	0	0
1	1	0	0	1	0	0
2	4	4	7	4	4	7
3	8	24	78	9	44	138
4	12	44	257	16	172	976
5	16	80	576	25	516	4242
6	20	116	1163	36	1208	14075
7	24	152	1826	49	2488	38248
8	28	188	2901	64	4504	90304
9	32	280				
10	36	308				

References

Alexander, Christopher, The Nature of Order, Book One, The Center for Environmental Structure, Berkeley, CA, 2002, pp.188-192..

Chalidze, Valery, Entropy Demystified, Universal Publishers/uPublish.com, USA, 2000.

Collins, Dennis G., " 'Tropical' Emergy and (Dis-) Order, in General Systems Bulletin of Int. Soc. For Systems Science (ISSS), Vol. XXXV, 2006, pp.17-22.

Collins, Dennis G., "Algorithm for Minimum Laterally-Adiabatically Reduced Fisher Information," in Bayesian Inference and Maximum Entropy Methods in Science and Engineering, 25th International Workshop, San Jose, CA, ed. By Kevin Knuth et al., American Institute of Physics Conference Proceedings #803, Melville, NY, 2005, pp.345-354.

Corning, Peter, Holistic Darwinism, University of Chicago Press, Chicago, IL, 2005.

Giannantoni, Corrado, The Maximum Em-power Principle, Center for Environmental Policy, University of Florida, Gainesville, FL, 2002.

Jablan, Slavik V., Symmetry and Ornament, 1995, available at http://www.emis.de/monographs/jablan/

Johnson, Carroll K., “Crystallographic Groups,” Oak Ridge, TN (Internet).

Kia, Omid Ebrahimi, “Distance-ordered residual coding,” in Document Image Compression and Analysis, available at http://www.cfar.umd.edu/~kia/Publications/Thesis/node-4.html.

Reid, Keith, “Image Analysis,” Advanced Imaging, Nov. 2006 (Software Issue), pp.18-21.

Weinstein, Alan, “Groupoids,” Notices of the American Mathematical Society, Vol.43 #7, pp.744-745.

Yagil, Gad, “Complexity and order in chemical and biological systems,” Chapter 56 in Unifying Themes in Complex Systems, ed. by Yaneer Bar-Yam, Perseus Books, Cambridge, MA, 2000.

What has been, is and would be a system, after all?

elohimjl (Elohim Jiménez López)
vicepresidente of BCSSS
elohimjl@gmail.com

Apparently - though it might be considered evident enough - any living being is inherently structured for being able to search means to support its livelihood in its immediate surroundings. It denotes that to be “something” alive it must be a self-organized entity, which implies it to be:

* capable of searching means that may allow its subsistence and even assure its survival;
* apt to learn how to leave no stone unturned, while searching what would be required for remaining alive.

This essential feature of the many diverse organic bodies, which proliferate on the very small terrestrial point since 1,800 million years ago, is the efficient possibility that emerges as the outcome of the relatively mysterious event, that Charles Darwin discovered explicitly while trying to comprehend properly its many diverse manifestations. He certainly recognized that it was generated singularly in every particular case in the domain of physiological functions that had been and continue being determined through the peculiar evolutionary stimuli that emerge in every terrestrial environment. These are the forces enigmatically generated by the evolutionary atmosphere that permeates the planet Earth, which eventually - though not on purpose - caused rather recently the emergence of Homo sapiens sapiens, around 30,000 years ago. This puzzling phenomena became the terrestrial NATURE: air, water and land in which animals (people included), plants and fungi live. However, Darwin did not notice why some humans reason to perceive this NATURE as if IT were a set of reservoirs of resources that humans should unceasingly utilize, exploit, transform, more and more efficiently, till every stockpile created de facto becomes exhausted.

Evidently "...reason does not automatically lead to a solution of the human problem and, by and large, has little influence in the sanguinary course of human history, was the disappointing discovery of our time.” wrote Ludwig von Bertalanffy in the preface of “Robots. Men and Minds”, 1967.

This reason is leading many humans to believe that humanity exists for conceiving, making, maintaining, systems as a profitable deal in order to organize purposefully the progress of human societies in time and in space. But the human societies as a whole, during the recent centuries are confronted with an increasingly serious crisis due in a large measure to many systems - intelligently conceived and built – that are producing inconvenient and even improper contingencies that obstruct the manifestation of the evolutionary atmosphere.

Today it is not proper to ignore that many actions, conceived, designed and implemented intelligently by some of our congeners during the very last millennia have become the causes of increasingly serious disturbances, disruptions and even obstacles in the terrestrial nature, making increasingly risky the survival of humankind.

"At places distant from where you are, but also uncomfortably close, a holocaust is under way. People are slashing, hacking, bulldozing, burning, poisoning, and otherwise destroying huge swaths of life on earth at a furious pace" ("The idea of Biodiversity" Takacs 1996).

A few years ago in New Delhi (International Congress of WOGS/1993), Stafford Beer described briefly what the components of contemporary change, at the end of the 20th century, were. "At the top is the spectacular advance in human misery. I estimate that more human beings are enduring agony today than ever before; the number could be greater than the sum of sufferers throughout history. I speak of starvation and epidemic; war and terrorism; deprivation, exploitation, and physical torture". Second in his list was: "...the collapse of the civilization we have known in our lifetime. We are looking at the rubble that remains of two competing empires. Soviet communism has accepted its own demise; Western capitalism has not accepted it yet" Anyhow he asserted: "I am not making a forecast but examining the facts that are under our noses" "...no-one talks about the exploitation of either nature or indigenous peoples any more. They talk instead about 'sustainable development' - but there is no such thing." And for the sake of argument he said: "Not only can development not be sustained; even the existing fabric cannot be sustained any longer." "These two spectacular transitions, of human agony and societary collapse are connected" and "we are governed by an oligarchy - of power, greed and terror" but "In the most extraordinary way, we are blind to this".

The problems enunciated by S. Beer are difficult to deal with but they have a possible and feasible solution that may be formulated when the causes of them are holistically examined.

This subject matter merits to be examined deeply and critically. First of all because very often it is rather ingenuously claimed that systems needed in order to civilize the human society are designed: for improving societal occurrences; for helping the communities to organize their living; and for organizing institutionally the society's functionality.

Instead it has been tragically realized how the dynamics of the whole "civilizing concern" continue being determined through systems created:

* for destroying past achievements;
* for compelling some other humans to enjoy a happy submissiveness;
* for implementing armed fighting in order to invade the territory of other nations for the arbitrary taking of their natural resources;
* for organizing technologically advanced (biological-, germ-, chemical- psychological-, war-fare
* for influencing the civil population by means of mass media manipulation or advanced kinds of bombardment in order to destroy consolidated institutions.

Really it has been mainly the mercantilism that was invented some millennia ago that has become the law and order for determining the rules required for pushing ahead what has been denominated the civilizing concern in order to allow and help clever humans to make any kind of advantageous affair:

* according to humanitarian concerns (usually expressed as idealized intention);
* aiming to lead business people to become richer and wealthier whatever the means (for being pragmatically attained after being encouraged by selfish motivations)
* aiming to attain perverse ambitions conceived and implemented for reaching or creating powerful positions that aim at assuring the submissiveness of masses of people [usually theoretically structured with the support of clever appraisals derived from a narrow minded or a selfishly interpretation of an ideology (liberalism, conservatism, socialism, nationalism, anarchism, fascism, feminism, ecologism)].

Today, the whole civilizing adventure, which started around eight millennia ago, continues to be encouraged through decision making conceived and organized by minds engaged on their own in the making of fruitful commercial and financial transactions for the fashionable group of people of an assumed (invented) high class of humans. It has been essentially determined by institutionalized actions carried out by the common people employed unilaterally as slaves, servants, lackeys, soldiers, workers, who were obliged to behave obediently while learning to interpret the reason of the "civilized" undertaking, which has been intelligently structured for the enjoyment of the high society.

Therefore, whatever might be the features of the various roles humans might play on Earth, they need to create and institutionalize:

* systems that may facilitate, stimulate and also advocate every individual to co-operate with other individuals without searching to defeat someone;
* systems for organizing consistently the influence of collectives on individuals which would be compatibly complemented with the influence of all individuals - not only the most enlightened ones – on collectives;
* systems conceived for actions that need to emphasize ecological, ethological, biological & ethical considerations, which are indispensable for supporting and maintaining the evolvement of biodiversity in every terrestrial environment and the development of cultural diversity in every space of the homosphere. Basic systems are needed everywhere on the planet in order:
  - to rebuild ethically another Homosphere,
  - to reorganize biologically the Bio-sphere,
  - to assure ethologically the survival rights of all other animals;
  - to impede ecologically the destruction of essential parts of the Eco-sphere.

It is also a research task to examine how to motivate the members of the systems community to become engaged in the development of Systems Thinking for the purposes enunciated above.

Ludwig von Bertalanffy suggested during the 60s ”the overall fate of the world depends on the adoption by humanity of a new set of values, based on a general systems WELTANSCHAUUNG (worldview)”. We must seek ”another basic outlook: the world as organization, (which) would profoundly change the categories of our thinking and influence our practical attitudes, as we must envision the biosphere as a whole ... with mutually reinforcing or mutually destructive interdependencies”

However valid it seems convenient to recognize first that it the crisis is an ancient problem. In a letter written to Henry Osborn Taylor in 1905, Henry Adams remarked: "At the present rate of progression since 1600, it will not need another century or half century to tip thought upside down. Law, in that case, would disappear as theory or a priori principle and give place to force. Morality would become policy. Explosives would reach cosmic violence. Disintegration would overcome integration.” Henry Adams did not live to observe fascism: he anticipated it. He knew that the detonators of violence and destruction were present in every part of the social structure of the Western society (”The Condition of Man”, Lewis Mumford, 1944).

The main aspect of the task is to encourage everybody else, though at present the civilizing experience is a growing tragedy. Some scientists (researchers, scholars and experts) still believe that human beings may choose to be concerned in "... finding a way forward depends on creating a society which is both capable of learning from the effects of its own actions and then acting on the insights so gained.” ("The New Wealth of Nations” John Raven, 1995). It means to motivate ourselves to rebuild the human society for making sustainable its flow equilibrium, learning to cope in time with the side effects that the human actions will engender.

Anatol Rapoport wrote, around 50 years ago: ”the scientist must subscribe to certain values (and discard others) not because he is a ‘good citizen’ or a product of a [particular] culture or a member of a [particular] church, but because he is a scientist.” "The scientist, in order to be consistent with

himself, cannot remain neutral, when confonted with a variety of competing ideologies and value-systems". ("Science and the Goals of Man" Rapoport 1950). I am searching to examine how to motivate the members of the system and cybernetics community to follow the steps given by Bertalanffy, Rapoport and Boulding, instead of being methodological accomplices of the business community interested in making monetary and financial profits.

The subject developed above is a particular aspect of a doctoral dissertation (Technische Universität Wien) and a personal research concern in the Ludwig von Bertalanffy Center for the study of systems science (BCSSS) (Vienna).

Systems Researcher Frederick Bernard Wood Passes On

We regret to inform the ISSS community that long-time member Frederick Bernard Wood, most recently of Flagstaff, AZ, died March 29, 2006, at age 88 of a heart attack, at his home in Flagstaff. He was born on December 17, 1917, in Sacramento, CA.

Dr. Wood was a lifelong advocate and practitioner of the system sciences. In 1954 he participated in the first organizing meetings and later was a founding member of the Society for General Systems Research (now known as the International Society for the Systems Sciences). He held SGSR leadership positions with the San Francisco Bay Area systems group, and later as Chair of the Systems Philosophy and Climate Change special interest groups. He presented scientific papers at SGSR/ISSS annual meetings throughout the United States and in Toronto, London, and Budapest, among others.

Dr. Wood was also founder and President of the Computer Social Impact Research Institute of San Jose, CA, and officer of the Earth Regeneration Society of Berkeley, CA. In that capacity, he participated in study missions to Russia and Cuba.

During World War II, Dr. Wood worked at the Massachusetts Institute of Technology Radiation Laboratory in Cambridge, MA, where he helped develop the SCR-584 microwave radar used by U.S. and Allied military forces in defeating the Axis Powers, and on other projects. His MIT work was carried out under the auspices of the White House Office of Research and Development.

He then returned to the University of California at Berkeley where he worked at the UCB Radiation Lab and earned the Doctor of Philosophy Degree in Electrical Engineering.

In 1952 he joined IBM Corporation where he worked until 1980 as a systems engineer, mostly in research and advanced systems development, in San Jose and Los Gatos, CA.

His colleagues, friends, and family remember Dr. Wood as a long-time advocate of socially responsible use of science and technology, and especially computer technology. He published two series of working papers called "Socio-Engineering Problem Reports" (SEPR) and subsequently "Communications Theory in the Cause of Man" (CTCM). His research included a focus on applying the concepts of information entropy, or negentropy, to socio-political systems so as to maximize freedom of expression consistent with a given level of socioeconomic development and stability.

He focused on global climate change beginning in the mid-1980s, and then on advanced electromagnetic applications beginning in the early 1990s—including potential new energy devices that could produce energy from the active physical vacuum (or quantum vacuum) more cleanly and cheaply than fossil fuel energy sources.

In recent years, he continued his early focus on factors important to the survival of modern civilization and democratic societies. At the 1998 Atlanta and 2000 Toronto ISSS meetings, he presented papers on the "Green Cube" three-dimensional approach to social analysis, involving multiple scientific disciplines, areas of physical activity, and modes of societal action.

He was a life-long member of the Unitarian-Universalist religion and associated with Unitarian churches in Boston, Berkeley, San Jose, and most recently Flagstaff.

Dr. Wood was married to the late Elizabeth Mead Wood. He is survived by two sons, Frederick Bruce Wood of Arlington, VA, and Peter Mead Wood of Portland, OR; daughter-in-law Erica F. Wood of Arlington, VA; three granddaughters; and two cousins.

Consistent with Dr. Wood's wishes, we have contributed his large library to the Institute of Noetic Sciences, Petaluma, CA (www.noetic.org), and his SGSR/ISSS materials to the ISSS archive maintained by Dr. Len Troncale at the California State University at Pomona. It is our intent to post his key scientific papers and reports on a biographical web site, and we will keep the ISSS advised of our progress.

The SGSR and ISSS were very important parts of Dr. Wood's professional and personal life, and we thank the systems community for providing him with so many opportunities for research and discussion on important systems topics.

Respectfully submitted by Dr. Wood's sons, Frederick B. Wood (email: fbwood@hotmail.com; cell: 703-615-4910) and Peter M. Wood (email: pwood@lmi.net; cell: 503-830-7375).

SECTION TWO
MEETINGS AND CONFERENCES

The 51st Annual Meeting
International Society for the Systems Sciences
Tokyo Institute of Technology, Tokyo, Japan
August 5-10, 2007
"Integrated Systems Sciences: Systems Thinking, Modeling and Practice"

The 51st annual meeting of the International Society for the Systems Sciences (ISSS) marks the beginning of another half-century history of interdisciplinary collaboration and synthesis of systems sciences. The ISSS is unique among systems-oriented institutions in terms of the breadth of its scope, bringing together scholars and practitioners from academic, business, government, and non-profit organizations. Based on fifty years of tremendous interdisciplinary research from the scientific study of complex systems to interactive approaches in management and community development, the 51st annual meeting of the ISSS intends to promote systems sciences as a holistic and integrated scientific enterprise.

Under the theme "Integrated Systems Sciences: Systems Thinking, Modeling and Practice", the 51st annual meeting of the ISSS will be held in Tokyo, Japan from August 5 to 10, 2007. It attempts to promote systems sciences as an approach to complexity in a broad sense, identified in organizations, communities and societies, and their environments, in such a holistic and integrated way that we draw on all of systems sciences from systems thinking and systems modeling to systems practice.

Systems thinking promotes holism as its primary intellectual strategy for handling complexity, whether the approach is hard or soft, carried out by academia or practitioners. Instead of analyzing complex systems by breaking them down into their parts, it advocates studying them as 'wholes' using systems concepts. Because Tokyo is, thankfully, a crossing point of western and eastern cultures, the meeting should provide an ideal platform for collaboration of western and oriental systems thinking.

Systems modeling aims at describing, analyzing and prescribing a real entity or phenomenon by constructing a variety of systems models. It includes mathematical models, conceptual models, computer models and simulation tools.

Finally, systems practice, or practical applications of systems thinking/ideas, is the greatest success of systems sciences in recent years. It has shown that systems sciences have the ability to translate theoretical notions into the practical domain through the use of systems methodologies, models and methods. The further refinement of these methodologies, models and methods, together with consideration of how we can use them in combination to tackle the multi-faceted problem situations, will be emphasized in this meeting. The annual meetings of the ISSS have a tradition of interaction and rich conversation, integrating provocative plenary discussions with breakout sessions organized around Special Integration Groups (SIGs) and other interactive formats for dialogue and synthesis. Along with the traditional SIGs, we encourage the participants to organize additional sessions.

Plenary Guest Speakers

Currently, we are in negotiation with possible plenary speakers for ISSS 2007 from government, industry and academia as well as NPO/NGOs. The prominent speakers are invited from inside as well as outside the ISSS. The following speakers have agreed to give a talk so far:
Hiroshi Deguchi (Tokyo Institute of Technology)

Plenaries
Nagia Mohammed Essayed (African Union Commission)
Takahiro Fujimoto (The University of Tokyo)
Debora Hammond (Sonoma State University)
Michael C. Jackson (Hull University)
Soho Machida (Hiroshima University)
Gary Metcalf (InterConnections, LLC)
Gerald Midgley (ESR Christchurch Science Centre)
Teruyasu Murakami (Nomura Research Institute, Ltd.)
Yoshiteru Nakamori (JAIST)

Plenary Panel Discussion
Louis H. Kauffman (University of Illinois at Chicago)
David C. Lane (London School of Economics and Political Science)
G.A. Swanson (Tennessee Technological University)

Call for Papers

Although the conference will accept papers related to the following areas of research, the list is neither exclusive nor restrictive. Proposals of new sessions and tracks are very welcome. Each session chair takes the final responsibility for running his/her session. All submitted papers are encouraged to state how relevant the paper is with regard to systems thinking, systems modeling and/or systems practice. Individual calls for papers for each SIG and stream at Tokyo follow this announcement.

In addition to paper presentations, Student SIG session,ISSS Roundtable, and Mini-Conversation will be organized. Anyone who is interested is welcome to participate in them without prior notice.

mportant Dates

May 31, 2007: The deadline for full papers. (Late papers received after May 31, 2007 may still be accepted to the conference, but they are included on the CD-ROM proceedings for the subsequent year.)

June 11, 2007: The deadline for abstract submission.

Venue

The meeting will be held at Ookayama Campus, Tokyo Institute of Technology (Tokyo Tech), located in the heart of Tokyo. Tokyo has excellent train and subway networks, which offer easy access to various interesting locations in Tokyo. Local attractions include traditional Japanese temples and shrines, Imperial Palace, modern high-rise buildings with latest fashion boutiques and gourmet restaurants, well-known Akihabara Electronics Quarter, and exciting nightspots in Roppongi: They are all within half-hour away from Ookayama Campus. Tokyo is certainly a crossing point of western and eastern cultures.

Social Programs

The conference banquet will be held on Thursday, August 9. Detailed plans will be announced later. Sightseeing tours at reasonable prices will also be organized for accompanying persons during the conference.

Registration

Regular	$500USD
Retired	$425USD
Developing country	$400USD
Student	$300USD
Second paper submission	$30USD
Additional banquet ticket	$30USD

The fees include:

* ISSS membership fees for 2008
* A program/abstract book
* CD-ROM proceedings
* Reception on Sunday August 5
* One banquet ticket for Thursday August 9

They do not cover accommodation or transportation expenses to and from the conference site. There will be an additional charge of $30 for a second paper submitted to the conference (with a maximum of two papers per person allowed).

Accommodations

From February 1, 2007 an on-line hotel reservation system will be ready. You will find a list of block-reserved hotels in Tokyo during the meeting period at special convention rates. You can access Ookayama Campus conveniently from these hotels by using public transportation such as railways and subways. We expect that room rates for the hotels introduced on the web page will vary between 8,000 yen to 18,000 yen per night for a single room. Transportation expenses between most hotels and the campus will be between 300 yen and 600 yen per day.

Committees

Organizing Committee
Organizing Committee Chair: Kyoichi Kijima, ISSS President 2006-2007, kijima@valdes.titech.ac.jp
Program Committee Chair: Satomi Segawa, ISSS Vice President for Membership and Conferences, satsegawa@jim.titech.ac.jp
ISSS Business Office: Jennifer Wilby, ISSS Vice President for Administration, isssoffice@dsl.pipex.com
ISSS Communications: David Ing, ISSS Vice President for Communication and Systems Education, 2005-2007, daviding@systemicbusiness.org

Local Organizing Committee
Yusuke Arai, Tokyo Institute of Technology
Hisako Chujo, Tokyo Institute of Technology
Xu Chunhui, Chiba Institute of Technology
Hiroshi Deguchi, Tokyo Institute of Technology
Pri Hermawan, Tokyo Institute of Technology
Yoshihide Horiuchi, Shibaura Institute of Technology
Takehiro Inohara, Tokyo Institute of Technology
Norimasa Kobayashi, Tokyo Institute of Technology
Tatsuyuki Negoro, Waseda University
Shingo Takahashi, Waseda University
Takao Terano, Tokyo Institute of Technology
Ryo Sato, Tsukuba University
Naoki Shiba, Chiba Institute of Technology

Co-Host and Conference Partners

Co-Host
* The 21st Century COE Program*
  "Creation of Agent-based Social Systems Sciences" established at Tokyo Institute of Technology.
* The 21st Century COE Program is an initiative by the Japanese Ministry of Education to cultivate a competitive academic environment among Japanese universities by giving targeted support to the creation of world-standard research and education bases (Centers of Excellence) in a range of disciplines.

Co-Sponsors

* Japan Society for the Promotion of Science (JSPS International Meeting Series)

* Research Institute of Information Technology and Management, Waseda University

The 21st Century COE Program* "Technology Creation based on Knowledge Science" established at Japan Advanced Institute of Science and Technology

Conference Partners (includes those under negotiation, in alphabetical order)

* American Society for Cybernetics

* The DAPAD Foundation (INTERPROSTAD)**

* International System Dynamics Society

* The Japan Association for Information Systems

* The Japan Association for Social and Economic Systems Studies

* The Japan Society for Management Information

* The Operations Research Society of Japan

* The Society of Instrument and Control Engineers

** A registered international NPO which coordinates the present research collaboration and is lobbying to transfer the findings to African and all stakeholders decision makers.

Further & Updated Information

For further and most-updated information, please consult the following websites:

* Tokyo 2007 on isss.org

ISSS 2007 Special Integration Groups
Descriptions and Calls for Papers

SIG 1: Systems Applications in Business and Industry

SIG Chair: David Ing

sabi@systemicbusiness.org

Authors are welcomed to share their papers and wisdom on Systems Applications in Business and Industry in Singerian Inquiry sessions at the 2007 ISSS meeting in Tokyo.

The SABI sessions at Tokyo2007 will follow the approach that proved successful at Sonoma 2006, Cancun 2005, Asilomar 2004 and Crete 2003. The agenda not only allows each author to relate the research that he or she has recently conducted, but to also share in the development of new knowledge by drawing on the wisdom across all participants. A Singerian Inquiry, as described by C. West Churchman in The Design of Inquiring Systems, is a systemic approach that features both multiple perspectives, and the "sweeping in" of new knowledge. Authors and attendees at prior sessions have reported great satisfaction in this lightly structured, free flowing approach to conversation.

Prior to the meeting:

Authors may discuss their ideas about potential contributions with the SIG chair, David Ing (sabi@systemicbusiness.org).

Authors submit abstracts. Abstracts are posted on a web site for review by all. Preliminary discussions about clustering ideas into sessions are facilitated online through web forums/ conferences.

Authors submit final papers. Papers are clustered into session of three to five papers. Preliminary discussions about ideas are facilitated online through web forums/discussions.

At the conference:

In each session, each author is permitted up to five minutes to present the key ideas of their papers. For the remainder of the 90-to-120 minute session (of which each speaker is the focus for about 15 minutes), an open discussion on common themes and differences between the papers gradually reveals more details about each author's thinking. Non-authors are welcomed to ask clarifying questions and contribute additional ideas, later in the session.

After the meeting, digests are posted on the Internet, and audio recordings may be available on CD-R. The artifacts from Crete 2003 are available at http://systemicbusiness.org/digests/sabi2003. (The 2004, 2005 and 2006 artifacts are still under development).

Authors who require more than five minutes to present their papers should not designate their papers for the SABI stream. The chairs of the streams on Organizational Transformation and Social Change, Human Systems Inquiry and Evolutionary Development aim to work together to appropriate place papers, and work through scheduling challenges.

Presentation Format: Authors will be asked to provide very brief (i.e. five minute) summaries of their key ideas or findings. The balance of the time is devoted to discussion between authors and participants about the topics. The use of Powerpoint is extremely discouraged, and LCD projectors will not be available. A flipchart or white board may or may not be available, for those who find that diagrams accelerate audience understanding.

SIG 2: Hierarchy Theory

SIG Chair: Jennifer Wilby

j.wilby@hull.ac.uk

The Hierarchy Theory SIG invites papers relating to the study of hierarchical structures and their relationships in theory and practice.

Hierarchy theory views systems as a set of ordered levels with a governing-governed relationship between the levels wherein the hierarchical levels are the sub-units of the whole system of interest. Further, the levels within the hierarchy are defined by the scale of observation chosen by the researcher (observer) and exploring this process of choice of scale is also of interest within the SIG.

Abstracts are invited from all fields of research whether natural or social systems, and research or practice. In addition, this year it would be interesting to hear from people willing to participate in discussion sessions on the principles and practice of hierarchy, and input is welcomed as to what form these sessions should take.

SIG 4: Systems Philosophy and Ethics

SIG Chair: Nestor Valero-SIlva

nestor.valero-silva@ntu.ac.uk

Exploring Boundaries. Our understanding of the notion of 'boundary' is key to our understanding of a systems-based philosophy and ethics. For example, if we assume that systemic boundaries are absolute, real and easily recognizable then it is possible to develop a universal philosophy and a universal ethics that provides explicit guidance for how we can lead a 'good' life in all contexts. We might refer to this as Modernist Ethics with its focus on a universal set of rules and the 'abstracting-

away' of context. If we are more inclined to assume that boundaries are merely a feature of our explanations and not an inherent characteristic of the real world, and that boundary recognition is radically context dependent, then we may be more inclined toward a relativistic philosophy in which anything goes. In such a philosophy, whether a particular action is seen as 'good' or 'evil' is completely in the eye of the beholder – context becomes so important that the ability to abstract away from the concrete and develop useful rules of thumb becomes impossible.

In (complex) systems thinking the notion of 'boundary' is problematized. A particular boundary is seen as a temporary and (critically) emergent pattern whose ontological status cannot be easily associated with either 'real' or 'non-real'. As such it is possible to empathize both with the view that boundary recognition is strongly context dependent (therefore containing a significant subjective element), and with the view that boundaries are an intrinsic property of any system (whether absolutely real or not) and therefore allowing – to some extent – the development of quasi-objective tools for their determination. In a general sense a complex systems view of system boundaries acknowledges that they are both simultaneously 'real' and 'non-real'. This may seem an odd suggestion to those who find comfort in the binary logic of Modernism, but complexity thinking provides ample evidence to suggest that such binary 'language' is not sufficient to understand such systems in their own terms. Although 'dichotomization' is essential to the process of 'languaging' and therefore understanding, it restricts (as much as enables) our view of such systems. A systems view of philosophy and ethics demands a more sophisticated view of language and its relationship to the 'objects' of our interest, than is proffered by representationalist (i.e., Modernist) views of knowledge. (Complex) systems thinkers who are interested in this issue of how our understanding relates to a systemic universe, and how certain actions might be chosen over other choices, are encouraged to submit their ideas to this SIG. The kinds of discussions that are relevant to this special session are: • Status, limits and legitimacy of knowledge regarding complex systems • Relationship between linear and nonlinear philosophies • Systems-based ethics • Systemic limits to theories of everything • Systems and the social sciences • Systems and globalization • Systems and human subjectivity

Presentation Format: The session itself will not be run as the usual one-to-many lecturing (i.e., formal presentations will NOT be the dominant mode of interaction), but with a more interactive (dialogical) mode focusing on critical discussion of the keys themes.

SIG 7: Systems Modelling and Simulation

SIG Chair: Janet Singer

jsinger@measures.org

For 2007, topics normally covered by the SIG on Systems Modelling and Simulation will be discussed in conjunction with Tokyo Special Tracks. Interested authors are directed to refer to the sessions on ...
Agent-Based Social Simulation;
Decision Systems;
Optimization; and
Systems Complexity

Presentation Format: Please refer to specifics in the Tokyo Special Tracks of interest.

SIG 8: Futurism and Systems Change

SIG Chair: Curt McNamara

mcnam025@tc.umn.edu

Call for papers in preparation. Please email initial inquiries to the SIG chair email.

SIG 12: Meta-modeling and Systems Epistemology

SIG Chair: Janet Singer

jsinger@measures.org

For 2007, topics normally covered by the SIG on Meta-modeling and Systems Epistemology will be discussed in conjunction with Tokyo Special Tracks. Interested authors are directed to refer to the sessions on ...
Knowledge Management;
Learning Organization;
Social Systems Theory: Conversation between Social Sciences and Systems Science; and
Chance Discovery and Meta-synthesis

Presentation Format: Please refer to specifics in the Tokyo Special Tracks of interest.

SIG 13: Systems Psychology and Psychiatry

SIG Chair: (Volunteers for organizing this stream are invited to contact isssoffice@dsl.pipex.com)

7cnf@dsl.pipex.com

SIG 16: Information Systems Design

SIG Chair: Béla A. Bánáthy

babanathy@sbcglobal.net

SIG Co-Chair: Olov Forsgren

olov.forsgren@hb.se

During the past century we have made spectacular advances in communications and computing technologies (IS) and the use of these technologies. It is clear that in the 21st century, communications, storage, processing, and process control capacities, as well as the human-machine interface will be developed to levels that are at present unimaginable. We have already greatly increased the surface-area of human-machine contact. Perhaps more importantly, we are elevating the contact to increasingly higher levels abstraction.

Still there is a big gap and question mark between the optimistic decision makers and politicians who think that IS are the solution to many problems and those who think that IS are an expensive technology with no or little impact on the progress on human condition on earth. Some may be think that IS makes the human conditions worse.

With many of the technical problems that constrained the information systems design efforts of the past having been solved, we can now focus more clearly on these fundamental questions and the foundations of the design task.

Papers addressing this general topic are invited, in special papers that develop and apply systemic or co-design ideas fostered in the ISSS and related scientific societies are most welcome. Especially papers reporting upon practical implications and practical experiences from deploying human-centric solutions contributing to a higher value for humans are encouraged.

In addition, to lend more focus to the sessions, two main themes are proposed:

Information system design – foundations, design and research approaches, including new forms of innovation, quality assurance and transfer of knowledge.

Information systems design – Industrial and society applications and their impact on human conditions, now and in the future. In particular the future design and applications of Internet and other developed collaborative work environments are of interest.

More specific papers and cases direct focusing the value of IS are welcome, example topics are:

Suggestion of value models for IS in use. How do we form a discussion or statement of the value of an IS? In a wider context than short-term financial gains of the issuing organization?

Examples of Second Order IS, meaning IS that host a discussion on their own usefulness.

Examples or ideas for Knowledge Management IS that support a systemic/Co-Design view of knowledge.

Topics can be addressed at the level of an individual human being, that of a group, a community, the larger society, or combinations of these. In each case it is of particular importance for us to ask fundamental questions involving the epistemological, ontological and ethical aspects of human-machine interaction in different organizational and societal settings.

Presentation Format: Contributors are encouraged to provide a brief (10-15 minute) overview of the key ideas followed by a more extensive discussion. We anticipate posting of the papers on the web prior to the meeting to provide a basis for discussion.

SIG 17: Research Towards a General Theory of Systems

SIG Chair: Len Troncale

lrtroncale@csupomona.edu

The ISSS GST-SIG embodies the original objectives of this society in their purest form, namely (1) to compare systems to discover processes that are similar (2) to enable transfer of useful fundamental knowledge between systems in order (3) to develop better theoretical models (4) for increased understanding of the unity of science.

We invite papers that identify, compare, or further develop several of the different schools of thought or general theories that are currently active or have historical significance. It is very important that the members of this society clearly distinguish between the various approaches and models that have been developed to date, who their caretakers are, and how they are being improved. We cannot help others if we do not understand ourselves. We also invite papers that conduct more detailed elucidation of any of the parts of these extant systems theories, that is, a paper can be tightly focused on one of the components of a general theory rather than on the theory as a whole. We also invite papers that compare and improve any of the tools and techniques used to study systems in general. Papers that reveal shortcomings of some extant theories or how theories that are now separate can be unified are also welcome. Any papers submitted to these sessions must exhibit the criteria of a general theory. If you do not know references that clarify these criteria, feel free to suggest such criteria. A discipline that does not have criteria that are useful in selecting among its output does not evolve and improve.

Presentation Format: Presentation format will depend upon numbers of submissions and will be developed by the group by email in the months preceding the meeting.

SIG 19: Medical and Health Systems

SIG Chair: Debora Hammond

hammond@sonoma.edu

In recognition of this year's conference theme, the Medical and Health Systems SIG invites papers that reflect an integrative approach, linking systems thinking, systems modeling and systems practice. Ideally, papers for this session will address integrated approaches to health and healing that explore the connections between personal, social, and environmental dimensions of health. Further, given the location of this year's conference, we encourage papers that examine the relationship between Eastern and Western models. Also of particular interest are papers documenting applied and community-based research.

Presentation Format: Authors will be asked to provide a brief (10 minute) overview of key ideas or findings from their research, leaving the remaining time for more interactive discussion among participants. PowerPoint or other media may be used to highlight important points, if desired, although more informal presentation styles are welcome and encouraged. The primary goal of this session is to facilitate dialogue and collaborative learning.

SIG 20: Living Systems Analysis

SIG Chair: James Simms

jrsimms@juno.com

The missions of the Living Systems Analysis (LSA) Special Integration Group (SIG) are the development and application of living systems theory and science. LSA is one of the oldest and continuously operating SIGs in the society. Much has been accomplished in the development and application of living systems theory and science. Miller's living systems theory provides the basis for much of the living systems analysis associated with the SIG. Also, the fundamental principles of a living systems science, equivalent to those of the other natural sciences, have been developed.

You are invited to submit papers that deal with the conference theme (Integrated Systems Sciences: Systems Thinking, Modeling, and Practice) from a living systems perspective. Also, papers linking living systems theory and science to other science and bodies of theory (e.g. biology, physics, chemistry, hierarchy theory, duality theory, accounting theory, economics, behavioral theories) are encouraged. We are especially interested in papers that extend living systems science and that apply the science.

Presentation Format: This SIG follows a more conventional presentation format with each author subsequently allocated 15 to 20 minutes for presentation and the remaining time allocated for questions and discussion.

SIG 21: Designing Educational Systems

SIG Chair: Patrick Jenlink

pjenlink@sfasu.edu

You are invited to submit papers that respond generally to the overall theme of the conference and specifically to ideas expressed in one of the questions that align with the 51st Conference and Annual Meeting of ISSS:

What can the sciences of complexity teach us about educational systems design that is concerned with democratic practice, social justice and sustainability?

What is the nature of the relationship between education, educational systems, and democratic consciousness?

How do we educate future generations of citizens (local, national and global citizens) to manage information and make socially responsible decisions?

How do we create and nurture educational systems that serve human needs while also protecting our resources (intellectual, aesthetic, moral, cultural and natural resources) for future generations?

The theme for the Designing Educational Systems SIG is focused on creating the human condition through designing educational systems that serve humanity and foster democratic civil society. Papers are solicited that fit within the following ideas:

Educational Systems Design as Social Discourse and Social Action – Designing educational systems that address issues of social justice, equity, and caring in the context of growing diversity and globalization of society. Specifically, types/examples of social discourse, including dialogue, ethical, and design, and how these types of discourse are used in the creation and sustainment of educational systems that contribute to democratization levels of society.

Educational Systems Design in the Service of Sustainability – Examining how systems and educational scholars and practitioners–scholarly practitioners–can serve on the behalf of "sustainability" by seeking to create new relationships within and across boundaries of existing social systems, and/or addresses the potential of diversity and complexity in the solving of human problems. Research papers, philosophical position papers, and theoretical papers that reflect considerations for Education in the Service of sustainability particularly as related to educational systems design and creating alternative future possibilities.

Designing Democratic Educational Systems through Design – Seeking models, exemplars, and idealized designs of educational systems that are "public spheres", premised on dialogue and democracy, with the purpose of reconnecting individual citizens and creating an authentically engaged public who embraces the responsibility for the education of future generations.

The Complexity of Educating Society, Locally and Globally toward Democracy and Sustainability, through Educational Systems – Understanding the complexity of educational systems and role educational systems play in democracy and sustainability of national and global society. Research papers, philosophical position papers, and theoretical papers that reflect considerations for the systemic relationship of all social systems, particularly as related to educational systems design focused on ensuring sustainability of intellectual, aesthetic, moral, cultural and natural resources.

Integrating Educational Systems through Design – Investigating models, studies, and position papers that focus on how educational systems (i.e., public education and higher education, systems education and K-12 education, parochial education and public education, etc.) have been integrated through systems design and how these integrated systems have incorporated complexity and democracy to addressed social issues and cultural problems in ways that hold promise and potential for serving humanity's needs.

Open Theme – General papers on designing educational systems and related systems design efforts concerned with education that do not fit one of the other themes, but which addresses the larger theme of the ISSS 2006 Conference, Complexity, Democracy and Sustainability.

An opening general session for the SIG will be scheduled to present the week's program. The sessions will be organized so as to maximize interaction among presenters and participants. Each presenter is asked to include with their abstracts a set of 3-5 "trigger" questions selected to promote/provoke a conversation about the presenter's issue or premise. Presenters are asked not to read their papers, but rather present their work in a conversational style that invites participation from the audience in attendance.

Presentation Format: Presenters should bring 20 copies of their papers, along with triggering questions that may be used to guide conversations. These will be made available to interested participants.

SIG 23: Spirituality and Systems

SIG Chair: Carl Swanson

carl18292003@yahoo.com

Please email initial inquiries to the SIG chair.

SIG 24: Human Systems Inquiry

SIG Chair: Arne Collen

acollen@saybrook.edu

Human Systems Inquiry (HSI) Special Integration Group (SIG) has a central emphasis on those Systems Sciences directly concerned with human beings. We invite you to contribute a paper relevant to the conference theme that also pertains to human systems inquiry. Any paper making this connection will be considered. The purpose of the HSI SIG is to provide an arena for ISSS members to present, exchange information, learn, and discuss: 1) ideas and viewpoints concerning issues in systems methods and methodologies relevant to human beings and the human condition; 2) applications of systemic ideas to systems practice in human contexts; 3) innovations in systems methodology; and 4) systemic case studies conducted in, with, or by human activity systems. Any one or more of these purposes may be related to the conference theme. For consideration, submit your abstract of 300 words maximum that includes at least one sentence relating the paper directly to the conference theme, and at least one sentence that connects your paper to any one or more of the four SIG focus areas stated above.

SIG 26: Critical Systems Thinking and Practice

SIG Chair: Jennifer Wilby

j.wilby@hull.ac.uk

The special integration group in Critical Systems Thinking and Practice invites contributions for participation in its paper sessions at the 2007 annual meeting of the ISSS. This is a multidisciplinary and challenging area that represents an alternative to understanding current human, social, and political issues, from a mainly managerial perspective.

Its scope goes beyond the boundaries of traditional management sciences. On the one hand, it involves a reflection on issues emerging from current systems thinking and practice from contemporary philosophy (e.g., post-structuralism, critical theory, postmodernism), and other social disciplines. On the other, it also includes research that although systemic in orientation is mainly grounded in those disciplines. Our aim is to take advantage of the multidisciplinary background and theoretical approaches of the participants, to generate a meaningful dialogue to inspire future research.

As a Critical Systems group we expect to be creative and innovative. Therefore, although the submission of a formal abstract and paper is expected, we would like to organise the sessions in accordance to the participants' needs and expectations. Please let us know of any suggestions about the topics, discussions or any other proposals as soon as possible.

For more information please contact Jennifer Wilby j.wilby@hull.ac.uk, at University of Hull Business School, The University of Hull, Hull, HU6 7RX, United Kingdom.

SIG 29: Evolutionary Development

SIG Chairs: Dave and Allison Ewoldt

nature@attractionretreat.org

We cordially invite you to join us at the 51st annual meeting of the International Society for the Systems Sciences (ISSS). Specifically, we hope you will consider contributing a paper and/or poster for presentation in the Evolutionary Development SIG (Special Integration Group) that it is our pleasure to co-chair. This will be the eighth year of productive meetings as an intact line of inquiry, the first four under the name of the Evolutionary Learning Community SIG, and the last three as the ED SIG. We will continue to focus our efforts on issues of timely relevance to which ELCs may best be dedicated.

Taken together (i.e., systemically), the conference theme, related guiding questions, and relevant sub-themes provide an exciting platform to catalyze the collective explorations of the ED SIG.

Inquiry in the area of Evolutionary Development involves revision of development notions and strategies, from a systemic and evolutionary perspective, in order to integrate the often isolated areas of human, economic, social, and sustainable development. Doing more with less, promoting living simply and meaningfully, and creating a sustainable economy where present and future human needs can be met without compromising the natural environment are some of the concrete objectives of Evolutionary Development. Evolutionary Learning Communities, as learning environments where people can learn together about the interconnected nature of our world, the ecological impact of our individual and collective choices, and the joy of finding a meaningful way to contribute to the emergence of sustainable and evolutionary futures, are the social units where Evolutionary Development can be set in motion for the ongoing self-organization of human societies in syntony with the planetary life support systems upon which they depend.

We invite both theoretical analyses relating to the principles and constructs of Evolutionary Development as well as presentation of explorations and practical applications that foster Evolutionary Development. This SIG welcomes treatment of themes that include, but are not limited to, consideration of the following topic areas:
- Human, social, and natural capital
- Self-directed sustainable development
- Community empowerment and participatory/anticipatory democracy
- Socio-ecological competence and the evolution of consciousness
- Design of ELCs as evolutionary guidance systems
- Evolutionary Systems Design as praxis
- Syntony as an organizing force in societal evolution

The ED SIG will be run as follows: During the conference itself, no formal paper presentations will be made, even though acceptance of both abstracts and full papers and/or posters is required. In order to be congruent with the general theme of the conference and the specific focus of our inquiry, our sessions will be conducted as learning conversations. Participants will engage first in a generative conversation in which they will have the opportunity to share the core ideas of their work with each other. After the group has attained a basic collective cognitive map of the research and constructs represented in the room, we will to move into a strategic conversation to identify areas of synergy. Once common themes and directions have been identified, we will move into an evolutionary conversation to create new knowledge and insights, and propose further collaborations.

By way of background information in preparation for this event, we urge you to visit the historical webpages of the ELC SIG. Since the ED SIG is a descendent of the previous ELC SIG, the statements of goals, purpose, and history, as well as of topics, format, and focus all bear directly on the spirit of engagement in which the ED SIG will meet in Tokyo. The URL to visit is as follows: http://isss.org/sigs/sig29elc.htm

Of course, if there is anything we can help clarify for you with respect to the above, please do get in touch with us.

For further information, please contact:
Dave & Allison Ewoldt
- Co-Chairs, ISSS ED SIG
U.S.A.: 96 E. Limberlost Dr. #102 - Tucson, AZ 85705
Tel: ++520/887.2502
eMail: dave@reststop.net or allison@reststop.net
Natural Systems Solutions
web: http://www.attractionretreat.org/NSS

For more information on the SIG, see SIG on Evolutionary Development

SIG 30 and 38 (Combined): Systems Science Basis for Systems Pathology and Systems Biology

SIG Chair: Len Troncale

lrtroncale@csupomona.edu

The new field of Systems Biology uses the vast amounts of reductionist data emerging from comparative panomics to study biological entities as systems (using knowledge of the parts to put Humpty Dumpty back together again). While systems biologists are using recent advances in network theory in their work, and at their conferences, they know little about systems science in general. For example, they are describing a new phenomenon they call “degeneration” but it is actually the same thing as “equifinality” that was described by Bertalanffy in the fifties. Nobel laureate Edelmann in a recent plenary1 remarked that “reductionism is not enough” for the study of these new ideas and a physiology review2 recently criticized current research as “naïve reductionism.”

The development of Systems Biology presents us with major opportunities for capturing funding and proving the worth of systems science by providing knowledge to the natural sciences. Funding levels of $34M to $100M are dedicated to establishing new Centers and Institutes for Systems Biology at major universities such as Harvard, Caltech, Berkeley, Johns Hopkins, Princeton, and the Claremont Colleges. There are already several different Systems Biology international conference series. But to capitalize on these opportunities, systems science must prove that it can provide “value added” insights and practical techniques to the natural sciences. We need exemplars of problems in systems biology that could be solved by application of knowledge gained from systems science and systems pathology.

The purposes of this fourth annual meeting of the Systems Pathology SIG are to invite (1) papers that summarize ideas, tools, or techniques of systems science that could inform systems biology, (2) papers that relate systems pathology to systems biology, (3) papers that show how advances in systems biology can contribute to systems science, and (4) papers that further develop systems pathology as a new discipline that could contribute to both systems science and systems biology. It should be noted that any advances in systems science of utility to systems biology/systems pathology would also be of utility to the systems neurosciences and earth systems science.

Presentation Format: This session will accept abstracts for platform presentation or for posters. Presentation format will depend upon numbers of submissions and will be developed by the group by email in the months preceding the meeting.

SIG 31: Applied Systems and Development

SIG Chair: Dennis Finlayson

dfinlayson@btopenworld.com

Call for papers in preparation. Please email initial inquiries to the SIG chair email.

SIG 33: What is Life/Living?

SIG Chair: John Kineman

john.kineman@colorado.edu

Since 1999 the WILL SIG has explored many aspects of the question “What is Life” from intrinsic and extrinsic perspectives. In keeping with the theme of the 51st Annual Meeting, the WILL SIG invites papers regarding the relationship between complexity, ecosystems, and sustainability.

We would especially like to explore the question “what is an ecosystem?” in the context of defining life. What distinguishes an ecosystem from an organism? From a physical system? Related questions are:

What is meant by sustainability? How is it defined?

Are ecosystems “alive” or do they just contain life?

What is the best way to comprehend the living aspect of ecosystems?

Are ecosystems complex? If so, how?

Within this theme there are many more related questions. A boad focus will be applied in selecting papers, however they should be aimed at elucidating the internal nature of life (prefeably ecosystems).

SIG 34: Women and Children

SIG Chair: Anne Nelson

nelsongroup@comcast.net

Papers are invited that identify themes and research interests which account for the perspectives, interests and needs of children and women in social systems.

More than half of the world’s population is women. Children are the future. Both groups are affected by different systems constructs, with formal and informal needs to have representation in the community or social system in which they live. Papers that apply systems thinking and understanding to family systems, community systems, and other social systems as related to the development of service systems are always welcome. A special invitation is extended to those who would like to present papers on the sub themes of integration and continuity as they apply to women and children in community systems. Papers are invited from anyone who is interested in developing scholarship focusing on this area of study.

What can the sciences of complexity teach us about social justice and sustainability? What is the nature of the relationship between information and consciousness? How do we manage information in a way that fosters effective decision-making processes? How do we nurture organizational structures that serve human needs while also protecting our resources for future generations?

For further information, please contact: Anne Nelson Chair, Women and Children in Community Systems at: nelsongroup@comcast.net

SIG 35: Systems-Specific Technology

SIG Chair: Vadim I. Kvitash

Kvitash@hotmail.com

The great scientific and practical potentials of General Systems Theory as well as Systems Sciences have not yet been fully realized. We are still mostly ruminating about the initial concepts of von Bertalanffy and have not yet progressed to the level of an exact and complete scientific theory with its own language, ontology, epistemology, methodologies, tools and technologies.

The purpose of the Systems-Specific Technology SIG is to be instrumental in the development and in the implementation of systems-specific technologies/tools sufficiently effective for scientific and pragmatic application in various domains and across the boundaries of different sciences. These technologies/tools are expected to push the limits of human perception, cognition, communication, and will transform today s Systems Sciences to the level of the Exact Systems Science.

ISSS members are invited to contribute to the Systems-Specific Technology Session(s) to explore the following:

Defining Systems-Specific Technologies/Tools

Network Structures of Systems-Specific Relational Languages

Concepts and Methodologies for Developing, Constructing, Testing and Validation of different types of Systems-Specific Technologies/Tools

Systems-Specific Technologies/Tools: Established and Under Development

SIG 36: Organizational Transformation and Social Change

SIG Chair: Maurice Yolles

m.yolles@livjm.ac.uk

One interest of this SIG is seeing organisations as social communities, thereby allowing for a convergence between management systems/cybernetic theory and sociology. Another concerns the change imperative for autonomous organisations in a complex world (more on this can be found at the Journal of Organisational Transformation and Social Change). Abstracts are therefore invited from all fields of organisational or social systems research and/or practice.

The format for submissions should be as a normal academic paper. The content may be a balance between theory and practice or a theoretical paper. A paper directly totally towards practice may be better directed towards the SIG on Systems Applications in Business and Industry (SABI). In any case the two SIGs work closely together. If requested, papers published in these SIGs will also be considered for the Journal of Organisational Transformation and Social Change.

Presentation Format: This SIG follows a more conventional presentation format (as compared to that of the SABI group), with each author sequentially alloted 15 to 20 minutes for presentation.

SIG 39: SIG for Students

SIG Chair: Nicholas Magliocca

nmagliocca@ucsd.edu

Students from approximately high school to post-doctoral age are cordially invited to join the second annual meeting of the Student SIG. This will take place at the 51st annual meeting in August 2007 of the International Society for the System Sciences (ISSS) held in Tokyo, Japan. We hope that you will consider contributing a paper and/or poster for presentation in our group discussions. However, simply participating in the group's generative and creative dialogue is also appreciated and welcomed. The goals of the Student SIG include: to foster interest and excitement for the systems sciences among younger generations; share and articulate ideas from many different disciplines; and to synthesis a collected "youth" view of the Society's past, present, and future.

It is my privilege to chair the third meeting of the Student SIG in an effort to meanifully connect younger generations in the exploration of the systems science approach. What makes this SIG unique, is the opportunity to integrate many varied disciplines and backrounds into a student presence within the ISSS. Distinguished members of the society will also be invited to come speak to our SIG to futher present their ideas. It is essential that youth participation be established in order to introduce youth to the workings of the ISSS, to create a contributing student membership, and to perpetuate the work of the ISSS in the future.

The meetings of the Student SIG will be conducted in much the same manner as the Evolutionary Development SIG, chaired by Alexander and Kathia Laszlo. There will be no formal presentations of papers/posters, but rather a brief period for the day's presenters to familiarize the group with their work. Triggering questions will be created beforehand in order to give the discussion a focus. After allowing for a brief question period, we will proceed to a strategically guided discussion. An evolutionary dialogue will take place in which new insights may be constructed and further collaborations made possible.

The best preparations for these meetings will be to read the papers scheduled for presentation, take part in outside conversations during the various workshops and plenaries, and come with enthusiam for a new youth collaboration!

Presentation Format: Brief presentations by authors, followed by strategically guided discussion.

SIG 40: Daily Morning Reflection Roundtable at ISSS 2007 Japan

SIG Chair: Sue Gabriele

sgabriele@gemslearning.com

Yoshi Horiuchi, Assistant Roundtable Coordinator ISSS Japan

Everyone is invited to our seventh annual morning Roundtable to take place daily Monday through Friday, August 6-10, from 8am to 9am. Join us every day, or whenever you like!

Our Roundtable purposes are to open a space for daily reflection on our ideals, that is, what we want to learn and create; to increase time for each of us to talk from our hearts and minds about what we are thinking, experiencing, and learning now; and to be listened to by the others in the group, enjoying and learning with each other in a new way. To make our purposes and format transparent, we will have the Roundtable guidelines on each chair for easy referral.

Folk wisdom and compelling research indicate that participants experience surprising benefits from this activity after about four sessions. Our experience with this format has resulted in the following theory: Just as we break the sound barrier when we travel faster than the speed of sound, we can break the communication barrier when we hear 25 authentic viewpoints in 50 minutes.

Looking forward to exploring this with you all!

Presentation Format: We spend 5 minutes listening to short readings: e.g., the Roundtable guidelines; We then spend 55 minutes on individual reflections or learning reports, time distributed equally among all present (e.g. 27 people = about 2 minutes each). Our suggested topic for the first morning might be: "What situations and projects did you leave behind to come here, and what could happen here that would be valuable to you, here, or in your work or life back home?" Each day, a different topic will be suggested by a different volunteering facilitator of the day.

Visit the Roundtable page for more details.

Exploratory Groups and Forums

The following are not officially designated Special Integration Groups by the ISSS, but may host papers or provide presentations or discussion around topics of interest to members.

Aging Systems : An Integrated Study of Humans, Organizations (Corporations), and the Universe: Lifespan and Factors Affecting It

TST Chair: Daniel Hershey

Daniel.Hershey@uc.edu

The aging process is, of course, a universal phenomenon. And for living systems (humans), the end result is death, the universal attractor. For so-called inanimate systems such as corporations, they need not die, but many do. And what of the universe, perhaps our largest and most important system. Aging theories abound, from wear and tear, free radical, autoimmune, finite potential, to those driven by thermodynamics, incorporating the ideas of Ilya Prigogine and Claude Shannon.

Abstracts (two or three paragraphs) are invited, for work dealing with “lifespan and factors affecting it”, “must we grow old”, and “entropy, infinity, and death” for humans, corporations, or the universe.

For more information, please contact Professor Hershey, at the University of Cincinnati, USA. Or go to his web site to see his work involving aging systems (www.basaltech.com).

Foundation of Information Science

Søren Brier: sbr.lpf@cbs.dk

Béla A. Bánáthy: babanathy@sbcglobal.net

Jed Jones: jed_c_jones@yahoo.com

Information, information processing and information society are all key terms in describing technology, intelligence and the social development today. Actually the idea of an information science including AI and cognitive science integrated with cybernetics and systems represents the most recognized attempt of making a transdisciplinary framework dissolving the conflict between science and the humanities. As Norbert Wiener pointed out: in formation is information, neither matter nor energy; and with the computer understood in principle as a Turing machine a new view has been created where information becomes the organizing and sometimes creative aspect of nature, that combined with the principle of mergence, can explain how life and mind arose from matter. This was originally done by Schrödinger and Wiener - among others – by combining the information theory with thermodynamics and today most often also with complexity science. But the term information has a multitude of varying definitions in use today. Some of these definitions are more technical in nature, while others are more abstract and broad-based. A precisely-defined, technical view of information as a mathematically-derivable quantity is represented by the theories of Claude Shannon who saw information as entropy in his attempt to optimize the transmission of a message composed of a string of bits through a noisy channel. Later Wiener and Schrödinger redefined the definition of information in view of thermodynamics as neg-entropy.

These models of information do not account for the concept of meaning. Building on this theoretical foundation, Gregory Bateson developed a non-technical and more wide-ranging concept of cybernetic information in a cognitive and an ecological direction defining information as “a difference that makes a difference” for a cybernetic mind attempting to link information and meaning in a cybernetic and systems framework including the whole biosphere, as well as culture and social systems. The questions is if Bateson managed to develop cybernetic information theory out of Wiener’s and others pure mathematical and logic definitions and into the realm of meaning, life, real human beings, ecology and culture or not. Brier (2007)claims that Bateson never managed to escape the functionalistic foundation of cybernetics to get into a theory that includes meaningful cognition and communication as well as qualia and free will in self-conscious linguistic beings. Such

theories have traditionally been created on a phenomenological and hermenutical philosophical basis by researcher like Husserl, Heidegger, Merleau-Ponty and Gadamer, all opposing science and technology as having a privileged admittance to the truth of reality. Heidegger considered cybernetics as the high point of the techno-scientific reductionistic and controlling knowledge type (as Habermas called it). Many inside cybernetics and systems claim that the later second order cybernetics of von Foerster plus the autopoiesis theory of Maturana and Varela, has solved this conflict at least when they are integrated in Niklas Luhmann's theory of socio-communication. In the last 25 years a partly phenomenological biosemiotics has been developed. This doctrine of signs that view life and meaningful signs as co-defining compete with the new cybernetics of being the transdisciplinary framework of meaning, cognition and communication.

For dialogue and discussion: Can the two views of information described above be reconciled? What is the difference between information, signal and sign, if any? Are they mutually contradictory or are they the complementary and therefore have to be combined into a Cybersemiotics to obtain our goals of communicating and understanding machines? What kind of technological, scientific and theoretical-philosophical data do we have to shed light on where we are in this problematique?

Systems Approaches in Arts-Informed Inquiry

SIG Chairs: Lezlie Kinyon & Bela A. Banathy

isss06lezlie@yahoo.com

babanathy@sbcglobal.net

Arts-informed inquiry is interdisciplinary and integrative. It incorporates the questions of validity, legitimacy, and significance of traditional approaches as well as the questions of meaning and function that an artist asks in approaching work. As Max van Manen (1990) suggested, a researcher must, at times, discover or invent a methodological approach sufficient to the subject under research in order to create an energetic response. Coupled with a systems approach, arts-informed inquiry has the potential to create a rich corollary to the Aristotelian episteme in science research. Arts-informed inquiry allows researchers to tackle elusive subjects such as the search for wisdom or our roles as thinking and aware beings within nature's complex web. It allows for the disciplined process of inquiry to be foremost in subjects of a personal nature such as gender identity or dreams and consciousness. The group will explore, through traditional academic papers and the approaches found in the arts, two parallel and equal "tracks" of inquiry: art-as-inquiry and arts-informed inquiry that utilizes the tools of the arts in science research.

Abstracts will be necessary for each type of presentation, just as for papers for the conference. Presentations may take many forms, from musical composition, performance work, visual art, and story-making, to academic papers of the more traditional variety. The chairs encourage an integrated approach involving both. All papers and performances must adhere to the spirit of inquiry in the systems sciences.

For 2007, this group will have the option of displaying work and an announcement will follow from the planning committee regarding this arrangement.

For further information and published references please contact Bela A. Banathy, Ph.D. and Lezlie Kinyon, Ph.D.

Tokyo Special Tracks (TST)

The following are not officially designated Special Integration Groups by the ISSS, but they are exploratory groups set up especially for the Tokyo conference. They may host papers or provide presentations or discussion around topics of interest to members.

Agent-Based Social Simulation

TST Chair: Shingo Takahashi

shingo@waseda.jp

Social simulation with agent-based modeling can be considered as developments of, and sometimes challenges to, social systems sciences. We intend in this track to provide both social scientists and computational researchers as well as systems researchers with an oppotunity to discuss various types of problems found in this developing field.

We aim to promote agent-based social systems sciences, social simulation, and new tools and techniques for social systems education as well as research.

The topics include, but are not limited to, the following computational social systems science approaches and issues:
Methodologies for Agent-based Modeling
Applications of Agent-based Modeling
Implications of Agent Based Modeling for Social Theory
Validation Techniques
Computational Organization Theory
Evidence Based Social Simulation
Social Simulation and Laboratory Experiment
Hybrid Gaming Simulation
Collective Intelligence
Social Complexity
Social policies
Integrated social/physical modeling for environmental policy formation
Emergence of social structures and norms
Social simulation and software design
Advanced computing technologies (e.g. the grid) and social simulation

Decision Systems

TST Chair: Takehiro Inohara

inohara@valdes.titech.ac.jp

This Tokyo Special Track (TST) of sessions addresses practical and theoretical contributions toward Decision Systems. Practical contributions include: case studies on decision systems in the real world; design, description, construction or application of decision support systems; development of methods for evaluation of decision systems, and so on. Theoretical approaches to decision systems consist of: all aspects of cooperative and non-cooperative game theory; conflict and risk analysis in decision systems management; graph models for conflict resolutions; group decision and negotiation, and so on. The track chair hopes that the contributions from both sides mutually interact and stimulate with each other, and create comprehensive structure of knowledge on decision systems.

Strategy Management

TST Chair: Amanda Gregory

a.j.gregory@hull.ac.uk

This Tokyo Special Track (TST) welcomes papers that draw on recent developments in systems thinking, modelling and practice to address strategy management. It is anticipated that this TST will attract papers on a diverse range of themes related to the:
survival, competitiveness, innovation and transformation of organisations;
purpose, responsibility and governance of organisations;
use of critical approaches to strategy development and implementation;
complex and dynamic contexts within which strategic decisions are made.

It is recognised that the field of strategy management is highly fragmented and full of conflicting theories and viewpoints. Therefore, the primary purpose of this TST is to facilitate a meaningful conversation between participants about the theory and practice of strategy management. Please email initial inquiries to a.j.gregory@hull.ac.uk

Sustainable Development

TST Chair: Debora Hammond

hammond@sonoma.edu

Reflecting this year's conference theme, "Integrated Systems Sciences: Systems Thinking, Modeling and Practice," this session welcomes papers addressing the challenges of sustainable development from a systems-oriented perspectives. Defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs," sustainable development implies attention to the idea of the triple bottom line: economic profitability, ecological sustainability, and social equity. Given the challenges of burgeoning population growth, climate change, depletion of critical resources, growing inequality between rich and poor, and increasing levels of hostility worldwide, the primary purpose of this session is to foster meaningful dialogue among participants from a variety of regional contexts. Papers submitted for this session should offer concrete proposals for addressing these challenges and nurturing a more sustainable future, drawing on insights from recent developments in systems thinking, modeling and practice.

Knowledge Management

TST Chair: Yoshiteru Nakamori

nakamori@jaist.ac.jp

Knowledge management was first introduced by computer technology firms in early 1980-ies as a computer software technology. In early 1990-ies, this term was adopted by management science, and made a big career as a management discipline. Then this important concept has been considered in many fields. In this session we will discuss:
Management of information relevant for knowledge-intensive activities,
Management of people in knowledge related processes, and
Management of human resources in knowledge civilization era.
We expect original papers from various fields such as:
Epistemology,
Information science, knowledge engineering, data/text mining,
Management science, knowledge management, management of technology,
Sociological systems science, technological and mathematical systems science.

Learning Organization

TST Chair: Hisako Chujo

chujo@valdes.titech.ac.jp

The Learning Organization TST invites excellent papers relating to study of learning organization in theory and practice. Abstracts are invited from all fields of research covering theory, case study or any system in learning organization, and so on.

Topics of this TST include but not limited to the followings:
New concepts relating to the learning organization and organizational development
New methodology to encourage peoples for the organizational learning in the real organization
Learning effects of the learning organization in the real organization
Use of informational system to speed up the organizational learning in the real organization

Presentation Format: Authors will be asked to provide a brief (10 minutes) overview of key ideas or findings from their research, leaving the remaining time for more interactive discussion among participants. Powerpoint or other media may be used to highlight important points, if desired, although more informal presentation styles are welcome and encouraged. The primary goal of this session is to facilitate dialogue and collaborative learning.

Optimization

TST Chair: Chunhui Xu

johyajapn-business@yahoo.co.jp

The Optimization TST invites papers on optimization theory and its practice in engineering, management and business.

Areas addressed include but not limited to linear and nonlinear programming, stochastic optimization, combinatorial optimization, integer and mixed programming.

While papers on optimum-seeking methods and their applications are welcomed, we are especially interested in research on innovative methodologies and methods for solving optimization models where seeking an optimum is theoretically or practically difficult. Theoretical and experimental study on heuristic and meta-heuristic solution methods are also welcomed.

Systems Complexity

TST Chair: Naoki Shiba

shiba@sun.it-chiba.ac.jp

This track invites papers from broad topics relating to systems complexity and theory of complex systems, preferably oriented to mathematically formal approaches to complex systems. This track welcomes papers that cover, but not limited to the following topic areas.
Mathematical general systems theory
Hierarchical theory of systems
Self organization
Modeling language for complex systems
Evolutionary perspective for systems
Chaos theory

Social Systems Theory: Conversation between Social Sciences and Systems Science

TST Chair: Akira Tokuyasu

atokuyas@hosei.ac.jp

The Social Systems Theory TST invites papers relating to the theoretical or empirical study of various social systems, especially from those who are interested in the theoretical and conceptual refinement of social systems theory.

More than a half century social scientists have adopted various ideas of general systems theory, and developed their own theories of social systems. Such ideas as an open/closed system, self-organization, negative/positive feedback, and autopoiesis are now popular in social sciences. Although these ideas have certainly stimulated theoretical development, there are various misunderstandings or merely metaphorical applications.

On the other hand systems scientists have applied their own theoretical ideas to the study of social systems. Although they have certainly built several interesting and stimulating theories and models, they have often ignored the tradition and inherent problems of social sciences.

There are many fruits, but also many gaps and discrepancies. For further development of social systems theory, we need conversation and correspondence between social sciences and systems science in order to redefine and rebuild the fundamental and essential concepts and ideas relating to social systems theory.

Chance Discovery and Meta-synthesis

TST Chairs: Yukio Ohsawa & Xijin T. Tang

ohsawa@q.t.u-tokyo.ac.jp

xjtang@iss.ac.cn

Chance discovery is to discover events/situations significant for decision making. So far, prevalent tools for chance discovery has been visualizing possible networks to show “islands and bridges” in the living environment of human. As a result, the methods of chance discovery achieved meaningful successes in marketing, politics, medical science, and the designs of products and systems.

Meta-synthesis is a systemic approach toward complex system modeling and calls for the integration of data, information, quantitative models and human experiences and knowledge during complex problem solving process. Human beings who are of advantage in qualitative intelligence may be more creative in problem solving if supported by the advanced computing and information technologies which show powerful capacity in quantitative intelligence. Meta-synthesis emphasizes the dominant role during man-machine collaboration. The double helix, a model of the process to chance discovery, i.e. for finding meaningful bridges in the visualized environment, is showing a promising direction to human-machine collaboration for realizing meta-synthesis

As it entered into 21st century, the world is facing increasing wicked problems across a wide scope. Complexity is regarded as one of most salient features and concerning topics among those complex systems or wicked problems. New visions or approaches are required to deal with those problems, especially in consideration of ubiquitous impacts of human and cultural factors. In this special session under ISSS’2007, we welcome paper submissions on existing/novel methods with similar ideas as chance discovery and meta-synthesis approach. Practical applications are strongly welcome. Submission are expected to cover but not limited to the following topics,
Agent-based modeling
AI and fuzzy systems
Creativity support
Complex system modeling and complexity
Decision support systems

Design of systems and products
Knowledge sciences and technologies
Multi-data mining
Social network and knowledge management
System Approaches

Cybernetics (organized by the American Society for Cybernetics)

TST Chair: Louis H. Kauffman

kauffman@uic.edu

This track is devoted to cybernetics, particularly to fundamentals of cybernetics and to cybernetic epistemology and second-order cybernetics in the sense of Margaret Mead and Heinz von Foerster.

We welcome papers and workshop proposals from non-ASC members as well as ASC members. The workshops will be arranged during the main conference period, and maximum time allowed for a workshop is 1 1/2 hours. The workshop proposals should be directly sent to Professor Kauffman (kauffman@uic.edu).

The American Society for Cybernetics will also organize tutorials or workshops prior to the conference in the time period Sunday, August 5, 2007: 11:00AM - 4:00PM. It will be opened to all ISSS participants.

OTHER CONFERENCES

Summit on Systems Biology 2007
Integrative Basic, Clinical and Translational Research
Hotel Jefferson, Richmond, June 5-7, 2007

For information and registration: www.vcu.edu/csbc/systemsbiologysummit

11th World Multi-Conference on Systemics, Cybernetics and Informatics
(http://www.iiis-cyber.org/wmsci2007)
Orlando, Florida, USA
July 8-11, 2007

We are emphasizing the area of System Sciences which, we think, is related to your specific academic or professional area.

All submitted papers will have an extensive reviewing process. A multi-methodological review will be applied in the selection process of this multi-disciplinary conference. Submitted papers or extended abstracts will have three kinds of reviews: double-blind (by at least three reviewers), non-blind, and participative peer-to-peer review. These three reviews will support the selection process of those that will be accepted for their presentation at the conference, as well as those to be selected for their publication in JSCI Journal. Details are given in the conference web site.

Of the papers presented, the best 10%-20% of the papers will be published in Volume 6 of JSCI Journal (http://www.iiisci.org/Journal/SCI) and sent free to over 200 university and research libraries.

Also, we would like to invite you to organize an invited session related to a topic of your research interest. If you are interested in organizing an invited session, please, fill out the respective form provided in the conference web page. We will send you a password, so you can include and modify papers in your invited session.

More details about the reviewing process, organizing invited sessions and submissions deadlines can be found at our web site. (http://www.iiis-cyber.org/wmsci2007)

If the deadlines are tight and you need more time, let us know about a suitable time for you and I will inform you if it is feasible for us.

Again, we invite you to participate in the 11th World Multi-Conference on Systemics, Cybernetics and Informatics which in the past has had participants from over 80 countries.

EURO XXII
The Association of European Operational Research Societies
July 9-13, 2007
Prague
OR Creates Bridges
Methodology of Societal Complexity

The 22nd European Conference on Operational Research EURO XXII will be organised by the Czech Society for Operational Research in cooperation with the University of Economics, Prague. The Conference will be held in the campus of the University of Economics which is situated very close to the Prague historical centre.Prague with its astonishing architecture, history and cultural heritage, numerous theatres, concerts, cosy restaurants and pubs attracts an increasing number of visitors every year. Here you can visit places where Mozart, Smetana, Dvorak composed and conducted their music, where writers like Kafka, Seifert and Kundera found an inspiration for their works. For further information, contact: http://euro2007.vse.cz

CCCT 2007,
Orlando, Florida, USA
July 12-15, 2007
http://www.info-cyber.org/ccct2007

There will be electronic (virtual pre-conference and post-conference sessions) for each one of the conference sessions, so the authors can interact with each other, providing comment and constructive feedback, before and after the conference days.

The registration fee of effective invited session organizers will be waived and they will receive at the registration desk, for free, a package of 4 DVDs and one CD containing the 6-hour tutorial “Fundamentals and History of Cybernetics: Development of the Theory of Complex Adaptive Systems”. The market price of this package is US $ 295. Twelve more benefits for invited session organizers are listed at CCCT 2007 web page.

ALAS (Asociación Latinoamericana de Sistémica / Latin American Systems Association) Conference
July 28 - 30, 2007

You can find the call for papers in http://atari.uniandes.edu.co/~redes/alas

It will be held in the Technical University of Ibagué, in Colombia.

Sponsored also by University of Los Andes in Bogotá.

International Conference of the System Dynamics Society
Boston, Massachusetts USA July 29 – August 3, 2007

The conference program will consist of invited and contributed sessions and workshops demonstrating the state of the art in the theory and application of system dynamics.

In addition, panel discussions, special interest group sessions, student colloquia, the modeling assistance workshop, events of historic interest, vendor displays, exhibits, demonstrations, Society business meetings and other related activities will be scheduled.

The conference schedule will provide time for relaxed social and professional interaction.

The conference will bring together diverse perspectives on the application of system dynamics to important issues in the theory of complex dynamic systems and the practical use of these tools to address critical real-world challenges. A small sampling of the topics to be addressed includes:

* Regional, national and global economic dynamics
* Environmental and ecological challenges
* Health care policy
* Agent-based and evolutionary modeling
* Industry evolution: interactions of competition and organizational capabilities
* Corporate strategy
* Organizational change and improvement in business and beyond
* Project management and product development
* Public safety and security
* Dynamic decision making and experimental studies
* Nonlinear dynamics
* Public policy applications
* Dynamics of information systems
* Developments in simulation tools and techniques for model analysis and visualization
* Advances in the modeling process and group model building
* System dynamics contributions to theory building in the social and natural sciences
* Teaching systems concepts and dynamics in the K-12 grades, universities, and beyond
* Many others

Conference website: http://www.systemdynamics.org/conferences/2007/index.htm

Conference Manager: Roberta Spencer isdc@albany.edu

Conference Host: System Dynamics Group, Massachusetts Institute of Technology, Sloan School of Management, Cambridge, Massachusetts USA

UK Systems Society 2007 International Conference:
Joined up thinking for a joined up world
3rd - 5th September, 2007
St. Annes College, Oxford University, UK.

For further information, please see www.ukss.org.uk <http://www.ukss.org.uk>

There is an exciting line up of key note speakers, covering the themes: joined up governance - Geoff Mulgan (former Director of Policy at 10 Downing Street under Tony Blair) and Raul Espejo (formerly Project leader of the Cybernetic Project for the organisation and management of the industrial sector of Chile); policy and change, a systems view of business and sustainability - Christopher Tchen (partner at Carbon Limiting Technologies) and Joanne Tippett (Lecturer at the School of Environment and Development, University of Manchester and founder of the DesignWays methodology); and the use of scenarios for strategic thinking - Kees van der Heijden (formerly head of the Business Environment Division in Group Planning at Royal Dutch/Shell and author of 'Scenarios: the Art of Strategic Conversation') and Peter Checkland Professor Emeritus of

Systems, Management Science, Lancaster University Management School and founder of the Soft Systems Methodology).

Each day there will be a facilitated workshop for conference delegates to discuss the themes emerging from the key note speeches, aimed at encouraging dialogue and interaction amongst participants. There will also be master classes with key thinkers in the field offered on day two of the conference. On the third day, we will have a workshop to discuss the key ideas emerging from the Grand Challenge workshops which have been held in the newly formed regional chapters of the UK Systems Society.

OR49
Edinburgh
4 – 6 September 2007

For its 2007 annual conference, the OR Society is heading to Edinburgh – a city that certainly lives up to its reputation as one of the most beautiful cities in Britain. This historic city is one of the world's most vibrant and cosmopolitan places and one of Europe's major tourist destinations.

The three-day conference programme contains a mixture of plenary sessions given by keynote speakers (Mark Elder from Simul8 and Ajaz Ahmed, a leading entrepreneur) and parallel streams, covering all aspects of OR. In addition there is a comprehensive social programme.

Please visit the webpage for further information:

http://www.orsoc.org.uk/orshop/(mgcuu355andlnh2hwfic3r45)/orcontent.aspx?inc=or49_main.htm

Innovation as Social Systems Design:
Creating Collaborative Communities of Action
October 2007
ISI International Systems Institute
Asilomar Conference Centre, Monterey, CA, USA
Education Track
October 21 - 23, 2007

These sessions include introductions and applications to Systemic Tools in the process of innovation for teams and organizations, along with speakers and a panel of diverse experts on creativity and innovation.

Dialogue Track

October 21 - 26, 2007

This conference format offers the entire education track activities (optional) along with time focused on deep dialogue by small teams in the traditional ACC format.

A favorite mantra in organizations these days seems to be "organic growth," and innovation is often touted as the way to get there, but in practice it frequently becomes just a nonthreatening way to talk about making major changes.

Yet change is fundamentally risky. As creativity is at the root of real innovation, being innovative means forging new paths. So, how do you do that?

We invite you to join us in exploring how innovation can be intentionally inspired in individuals and teams. By applying and sharing approaches from dialogue, participative systems design, and psychology we can learn how to purposefully bring about transformative and innovative insights in groups.

The 5-day conference structure is based on the ISI conversation process.

Due to popular request, we are also offering pre-conference tutorials in an on-line format.

Save the dates of your track of choice today!

Come and immerse with us in learning about ways to deal with this new “innovation imperative.”

http://www.systemsinstitute.com

Conference on Information Management and Internet Research
Joondalup, Western Australia
November 6 - 7, 2007

Hosted by the We-B Centre, Edith Cowan University

Conference Web Site: http://www.business.ecu.edu.au/cimir/

The conference aims to bring researchers together in the related fields of information management and the Internet. Submitted papers will undergo a double blind review process and accepted papers will be published in a CD proceedings with an ISSN. Researchers are encouraged to submit research papers on aspects related to the broad themes of managing information, the Internet, and systems and technology in organisations. Sample themes are shown below:

- Electronic Business
- Information systems and organisational issues
- Information Systems
- Project management
- Marketing on the Internet
- Marketing information management
- Information design
- Business Strategy and information
- Information Technology
- Web site design
- Electronic markets
- Knowledge management
- Education and the Internet/IT
- Electronic collaboration
- Internet and business
- Information systems in the construction industry
- Social implications of technology and systems
- Society and technology
- Accounting systems and information management
- Security and information management
- Healthcare administration and systems
- Social networking
- Mobile commerce
- Supply chain issues
- e-health
- Research methods in business

Important Dates
Paper submission deadline: 1st July, 2007
Feedback on submission: 1st August
Final submission of accepted papers: 15th August
Pre-conference registration and drinks: 5th of November, 2007
Conference presentations: 6th and 7th of November, 2007

Paper submission

Research papers should be between 7 and 10 pages A4 (single spaced) including references. Papers should include an abstract. All papers will be double blind reviewed by an international panel of academics. Accepted papers will be published on a CD of Proceedings with an ISSN. Submit papers to: c.standing@ecu.edu.au

Registration Details

Early bird registration: A$375 by the 15th of August, 2007. Final date for registration (full amount): A$425 by the 25th of August, 2007. Payment details will be provided nearer the time of registration. Registration covers pre-conference reception, lunches, teas and proceedings.

Contact Details and Enquiries

Professor Craig Standing, Edith Cowan University, c.standing@ecu.edu.au

Conference Web Site: http://www.business.ecu.edu.au/cimir/

KSS 2007
The 8th International Symposium on Knowledge and Systems Sciences
Jointly with KICSS2007
The 2nd International Conference on Knowledge,
Information and Creativity Support Systems
Ishikawa High-Tech Exchange Center
http://www.ishikawa-sp.com/ispEng/htcenter/index.html
Ishikawa prefecture
http://www.pref.ishikawa.jp/index_e.htm
Japan
November 5-7, 2007

Conference Web Site: http://css.jaist.ac.jp/ijcks2007/ <http://css.jaist.ac.jp/ijcks2007/>

The KSS Symposium is an annual conference of the International Society for Knowledge and Systems Sciences (ISKSS) <http://www.jaist.ac.jp/iskss/>

Knowledge science and systems science can be used for one another as methodology and tool and benefit each other. Around these disciplines, the first International Symposium on Knowledge and Systems Sciences, initiated and organized by Japan Advanced Institute of Science and Technology (JAIST), was held in September 2000 (KSS2000), then KSS2001 (Dalian, China), KSS2002 (Shanghai, China), KSS2003 (Guangzhou, China), KSS2004 (JAIST, Japan), KSS2005 (Vienna, Austria), and KSS2006 (Beijing, China) had been held and many scientists and researchers, from different countries, contributed to all those symposia. This year, the 8th symposium, KSS2007 will be held in JAIST, Ishikawa, Japan, jointly with the 2nd International Conference on Knowledge, Information and Creativity Support Systems (KICSS) and still expect to provide excellent opportunities for the presentation of interesting new research results, and discussion about them, leading to knowledge transfer and the synergetic generation of new ideas.

Scope

The presentations at the KSS2007 (jointly with KICSS2007) are expected to cover the following areas:

- Systems methodology for knowledge integration and creation
- Knowledge systems engineering
- Complex system modeling and analysis
- Meta-synthesis
- Creating support system
- Cross-cultural learning on systems thinking and knowledge management
- Social network analysis and knowledge management
- Decision science and decision support system
- E-learning, E-content, E-knowledge and Knowledge-based E-commerce
- Data mining and knowledge discovery
- Group decision and negotiation
- Knowledge reuse and ontology
- Natural language understanding tools
- Web intelligence tools

Important Dates

Draft paper (or extended abstract) submissions due: May 31, 2007.

Notification of acceptance: July 30, 2007.

Final camera-ready due and early registration opens: September 30, 2007.

Early registration closes: October 15, 2007

Conference: November 5-7th, 2007.

Paper Submission

4 to 8 pages of extended abstract or paper should be submitted for reviewing process. Papers must be submitted electronically as PDF or Word file, via the submission web site. Final camera-ready paper should be a maximum of 8 pages. For format of papers and submissions, please refer to: http://css.jaist.ac.jp/ijcks2007/

Publications

Accepted papers will be published in the hard-copy proceedings of KSS2007 and in a CD jointly with papers accepted by KICSS2007. Selected papers will be published in the International Journal of Knowledge and Systems Sciences <http://www.jaist.ac.jp/iskss/journal/index.htm> .

For further information, contact Ms. Kawabata, Akiko, Center for Strategic Development of Science and Technology, School of Knowledge Science, JAIST Email: coe-secr@jaist.ac.jp Phone: +81-761-51-1839 Fax: +81-761-51-1767

Australia New Zealand Systems Conference 2007
"Systemic development: Local solutions in a global environment"
2 – 5 December 2007
Auckland, New Zealand

ANZSYS'07 is the thirteenth annual systems conference to be held in this series and is located in Auckland at Unitec New Zealand (Mt Albert Campus). The theme of this year's conference is 'Systemic development: Local solutions in a global environment'. As the call to solve intractable problems in a globally-connected world increases, systems thinkers turn towards systemic problem solving. The challenge is to apply holistic, global systems concepts to local situations.

This call goes out to both academic and practitioners in applying systems thinking principles to such problems.

The following is extracted from the conference website: http://anzsys07.unitec.ac.nz

Author information

Papers of up to 4000 words all up (including title, abstract, keywords, body, footnotes, references, diagrams, and bios) on one or more of the conference themes will be considered for the conference. In all other respects, papers need to conform to the format and order of material requirements for the Emergence: Complexity and Organization journal at: http://emergence.org/ECO_site/web-content/sub_info.html

All papers will be refereed double-blind for inclusion in the refereed conference proceedings.

Important dates

Thursday 31 May 2007: Abstracts (150 words) and keywords due.

Sunday 15 July 2007: Papers due.

Wednesday 15 August 2007: Reviewers feedback sent to Authors

Friday 31 August 2007: Final copy of accepted papers due:

Wednesday 31 October 2007: Last day for early-bird registration

Sunday 2 - Wednesday 5 December 2007: The conference

Email submissions to, and contact organisers at: anzsys07@unitec.ac.nz

Conference chairs

The conference is chaired by Kay Fielden (Unitec New Zealand) and Jim Sheffield (University of Auckland).

ISSS 2008
The 52nd Annual Meeting of the International Society for the Systems Sciences
Madison, Wisconsin July 13-18, 2008

Gary Metcalf, ISSS President 2007-2008

For further information: contact the ISSS Office at isssoffice@dsl.pipex.com

ISSS 2009
The 53rd Annual Meeting of the International Society for the Systems Sciences
Brisbane, Australia July 12-17, 2009

For further information: contact the ISSS Office at isssoffice@dsl.pipex.com

SECTION THREE
ISSS BUSINESS

NOTICE OF UPCOMING ISSS MEETINGS

The annual membership, council and board meetings willbe held during the annual conference at Tokyo Institute of Technology, Tokyo, Japan (August 5-10, 2007).

Minutes of 2006 ISSS Board of Directors Meeting
Rohnert Park CA USA, July 11, 2006

Present:

Debora Hammond	President 2005/2006 (present until 7:15)
Jennifer Wilby	VP Administration
Len Troncale	Trustees' Representative
Kyoichi Jim Kijima	President-Elect 2006/2007
Maurice Yolles	VP Research & Publication
G.A. Swanson	Visitor (voting for Debora Hammond in her absence)
Lynn Rasmussen	VP Funds and Treasurer
Gary Metcalf	VP Membership & Conferences
David Ing	VP Communication & Systems Education
Carl Slawski	Chair, Southern California Chapter
Pamela Buckle	VP Protocol/Secretary

Absent:

Martin Hall	VP Funds & Treasurer
Enrique Herrscher	Past President 2004/2005

Debora Hammond called the meeting to order at 6:00 pm.

Announcements and General Information:

1. Ratification of Elections: Gary Metcalf (President-Elect 2007/2008); Jennifer Wilby (VP Administration); Pamela Buckle (VP Protocol/ Secretary), Maurice Yolles (VP research and Publications). Debora Hammond asked for commendation for the outgoing officers.

2. Proposed Society Budget 2006/2007

Discussion included a review of the Society's typical turnover in membership each year (50%). This year the Society experienced only 1/3 turnover. Len Troncale mentioned his concern that the demographic of the Society's membership is skewed toward older/retiring scholars.

3. Replacement for VP Treasurer and Funds/Fundraising

It was discussed that, due to lack of performance, the office of the current VP Finance be vacated and a replacement take Dr. Hall's place for the remainder of his term.

4. Bylaw Motion to Increase Membership Fees

Given an past increase in the price of *Systems Research and Behavioral Science*, and to preserve ISSS's income levels, a motion was put forth to increase the fee levels of all membership categories by $20. Debora Hammond suggested that we avoid a fee increase for students, to preserve and

strengthen the presence of students in the Society. It was then agreed that the student increase would be minimal and a change of only $5 would be proposed for that category of membership.

5. Bylaw Motion Change to Reserve Account Management, and To Provide an Office Stipend

GA Swanson recommended that an annual stipend be paid to the VP Administration in this year (and also to the Webmaster in the year following), for their services to ISSS.

6. Bylaw Revision

G.A. Swanson volunteered to redraft the society bylaws with the assistance of the President and VP Protocol/Secretary in the coming year.

7. 2007 Conference Progress Report

Jim Kijima reported that the Tokyo organizers would like to invite the American Cybernetics Society to be conference partners again for 2007. Jim has approached IFSR to invite its members' participation in this conference. ANZSYS has approached Jim to request conference partnership for 2007 as well. Lynn Rasmussen noted that she will be drafting sponsorship policies/standards. Gary Metcalf indicated that all additional members participating in the ISSS 2007 conference via partnership arrangements should go through the ISSS membership and paper review process. Jim inquired about copyright permission for ISSS conference papers (copyright is retained by the authors). As terms of its sponsorship of this conference, the Japanese government will require tangible proof of the conference, in the form of a printed book of selected papers.

8. 2008 Conference Location

Gary Metcalf is investigating several possible locations for the 2008 conference. The Ackoff Center in Philadelphia (USA) is interested in submitting a proposal. A tourist bureau in Nova Scotia (Canada) is interested in facilitating a conference which could be located at Dalhousie University. Locations in Madison Wisconsin (USA), Trent University (Canada), and IBM's Palisades executive retreat center in upstate New York (USA) are also being explored. Dates TBA. Australia (Ockie Bosch, Bob Cavana, John Broadbent and Janet McIntyre) has expressed interest in hosting the conference in 2009 (possibly in Brisbane).

9. Web Administration Report/Issues

David Ing reported on the new html paper submission process, which encountered some technical difficulties in its first year.

10. Publications

Maurice Yolles proposed that the society start its own peer-reviewed e-journal to provide visibility for the SIGS throughout the year and as a developmental focus for ISSS. He proposed that the journal would operate with 2-3 SIGs each year pulling together to create each issue, with the number of yearly issues to be determined. He suggested that other systems organizations could be featured from time to time. He proposed that SIG chairs be responsible for identifying appropriate peer reviewers. G.A. Swanson raised the issue of whether or not the Editor's position should fall under the Publications committee. Gary Metcalf expressed a concern that the proposed journal might dilute the readership of SRBS. Gary recommended that the issue be raised at the Council meeting. A task force lead by Maurice Yolles and including Gary Metcalf, David Ing, and Pamela Buckle was created to examine the feasibility of this proposed e-journal.

11. Proposed Nomination of VP for Membership/Conferences 2006/2007

Jennifer Wilby indicated that Debora Hammond and Jim Kijima recommend that Satomi Segawa work locally with Jim and Jennifer on the 2007 conference, in the position of VP Membership/ Conferences. This nomination will occur at the ISSS Council meeting July 12, 2006.

12. Other Business

Lynn Rasmussen indicated that in her VP Fundraising position, she would be requiring a committee to work with her on developing fundraising objectives, policies, identification of possible donor sources, an annual calendar, and an articulation of donor benefits.

Motions:

1. David Ing moved ratification of the elected members. Debora Hammond seconded. Motion unanimously passed.

2. Jennifer Wilby moved that the proposed 2006/2007 budget be passed. Maurice Yolles seconded. Motion unanimously passed.

3. David Ing moved that the position of VP Finance be vacated. Maurice Yolles seconded. Passed by majority vote.

4. David Ing moved that Lynn Rasmussen assume the position of VP for Funds and Treasurer for the remainder of Dr. Hall's term. Debora Hammond seconded. Motion unanimously passed.

5. Debora Hammond moved that the membership fees be increased for all categories with the exception of student membership which would increase by $5 per year. Pamela Buckle seconded. Motion passed unanimously. .

6 . The Board of Trustees had formerly been administering an account of funds comprised of income from past successful ISSS conferences. Given recent years' moderate conference income:expense ratios, it was proposed that the Vice President Administration be given authority to control those funds. Each year's annual meeting would be required to repay any loans taken from this fund to finance conference-related cash flow requirements (i.e. advance deposits for hotels, facilities, etc.). Three bylaw changes (in Sections 4.5, 6.3.6, and 6.4.1) were proposed to facilitate this change in spending authority.

7. GA Swanson moved that Bylaw Sections 4.5, 6.3.6, 6.4.1 be changed to clarify the use of the Trustees funds for any proposed loans to future conferences. David Ing seconded. Motion passed unanimously.

8. GA Swanson moved that the ISSS provide a stipend for the VP Administration, out of the office budget, not to exceed $5000/year. Lynn Rasmussen seconded. Motion passed with one abstention (Jennifer Wilby).

9. GA Swanson moved that, beginning next year (2007), the ISSS institute a stipend for the Webmaster, out of the office budget, in an amount of 50% of the stipend granted to the VP Administration. Gary Metcalf seconded. Motion passed unanimously.

10. Lynn Rasmussen moved that the board retain an artist to prepare camera-ready artwork of an ISSS logo. Jennifer Wilby seconded. Motion passed (Len Troncale abstained).

Meeting adjourned at 9:10 pm.

Minutes of 2006 ISSS Council Meeting
Rohnert Park CA USA, Date, July 12, 2006

Present:

Debora Hammond	ISSS President 2005/2006; Interim SIG Chair, Health
Jennifer Wilby	VP Administration; SIG Chair General Systems Hierarchy
Vadim Kvitash	SIG Chair, Systems-Specific Technology
Arne Collen	SIG Chair, Human Systems Inquiry
Len Troncale	SIG Chair, General Theories of Systems; SIG Chair, Systems Pathology
Kathia Castro Laszlo	SIG Chair, Evolutionary Development
Alexander Laszlo	SIG Chair, Evolutionary Development
Maurice Yolles	VP Research & Publication; SIG Chair, Org'l Trans'n & Social Change
G.A. Swanson	Trustee
Nicholas Magliocca	SIG Chair, Students
Gary Metcalf	VP Membership & Conferences
David Ing	SIG Chair, Systems Applications in Business & Industry
Carl Slawski	Chair, Southern California Chapter
Pamela Buckle	VP Protocol/Secretary

Debora Hammond called the meeting to order at 6:36pm.

Announcements and General Discussions:

1. Budget for 2006/2007

Jennifer Wilby presented a proposed ISSS budget of 2006/2007. She explained that this budget is separate/independent of the annual conference budget. The 2006/2007 budget is variable, based on membership numbers from year to year. The only fixed expenses are $100/yr to IFSR and $600/yr for the web server.

2. Participation of other Systems Groups in ISSS Annual Meetings

There has been discussion over the years regarding inviting the American Society for Cybernetics to participate in ISSS meetings on an annual basis.

3. Ratification of Proposed Increase to Membership Fees

The Board voted to increase members' fees by $20 for each membership category except students (whose annual membership will be increased by $5 – being subsidized by the increased in other categories). These proposed increases are the first for ISSS in approximately 10 years.

4. Ratification of Bylaw Changes

The Board of Trustees had formerly been administering an account of funds comprised of income from past successful ISSS conferences. Given recent years' moderate conference income:expense ratios, it was proposed that the Vice President Administration be given authority to control those funds. Each year's annual meeting would be required to repay any loans taken from this fund to finance conference-related cash flow requirements (i.e. advance deposits for hotels, facilities, etc.). Three bylaw changes (in Sections 4.5, 6.3.6, and 6.4.1) were proposed to facilitate this change in spending authority.

5. Bylaw Revision

G.A. Swanson volunteered to redraft the society bylaws with the assistance of the President and VP Protocol/Secretary in the coming year.

6. Proposed ISSS E-Journal

Maurice Yolles proposes that the society create an E-journal to enhance the visibility of the SIGS.

He envisions that a different group of SIG chairs be responsible for putting together each issue. He suggests that ISSS may wish to invite the collaboration of IFSS and other systems groups as well. He is leading a working committee to discuss the feasilbility, requirements, etc. associated with such a venture that he will present at the 2007 meeting.

Motions:

1. GA Swanson moved to approve the budget as presented. Maurice Yolles seconded. Motion passed with one abstention (Len Troncale).

2. Maurice Yolles moved that the financial report be certified. Alexander Laszlo seconded. Motion passed with one abstention (Len Troncale).

3. Pamela Buckle moved acceptance of the membership fee increases as proposed by the Board of Directors. Maurice Yolles seconded. Motion unanimously passed.

4. Len Troncale moved acceptance of the proposed bylaw changes. GA Swanson seconded. Motion unanimously passed.

5. Jennifer Wilby moved that Satomi Sagawa be nominated for the position of Vice President Membership & Conferences 2006/2007 (local organization). Gary Metcalf seconded. Motion unanimously passed.

Meeting adjourned 7:31pm.

MINUTES OF ISSS MEMBERSHIP MEETING
Rohnert Park CA USA, Date, July 14, 2006

Jennifer Wilby presented information from the board and council meetings, including:

- Current year ending December 2005 financial position of the society
- Budget for the next year
- Status of the board and changes in position
- Bylaw amendments agreed by Board and Council to be sent to membership by mail for vote
- Updates on progress of organizational changes and development of the website and eleectronic management on-line of memberships and conferences.

CONFERENCE ISSS2006 FINANCIAL REPORT

Category	December 31 2006
Receipts	
Receipts from conference	140,672.00
From Sonoma State	7,217.51
Sponsorships	2,000.00
Loan from ISSS	7,700.00
From Food Connections	530.00
Total Receipts	158,119.51
Expenses	
Repay Loan from ISSS	7,700.00
Memberships to ISSS	16,800.00
SIG donations to ISSS	1,400.00
2006 Journal Subscriptions	146.00
Bank Charges	6,929.46
Accommodation and Food Sonoma	90,843.67
Speaker Costs	3,498.71
Office costs	4,827.01
Publicity	2,600.00
Bateson Forum	3,978.00
Entertainment	3,200.00
Food Connection	800.00
Recycling	230.00
Vickers Award	665.00
Program	4,174.74
CDROM Proceedings	4,423.80
Postage to UK	227.71
Golf cart rental	125.00
Video Editing	1,500.00
Total Expenses	154,069.10
Surplus to ISSS office	4,050.41

CASH ACCOUNTS ISSS JAN-DEC 2006

Cash Beginning January 1 2006			$ 51,895.66
Memberships received 2006	10,583.00		
Membership by bank transfer	153.02		
From conference			
SIG contributions 2007	1,400.00		
Additional 2006 journals	146.00		
Surplus from conference	4,050.41		
Repay loan from conference	7,700.00		
Memberships conf. for 2007	16,800.00		
CDROM sales	90.00		
Mail inserts	117.00		
Interest on certificate of deposit	1,160.37		
Income total		$ 42,199.80	
			$ 94,095.46
Internet costs	944.30		
Journals	12,087.22		
Bulletin printing	1,404.90		
Postage	2,330.37		
Office costs/stationary/equipment	4,577.15		
Shipment Taxes	60.61		
Copying	6.05		
Office stipend	5,076.00		
Phone	365.94		
Bank charges US Accounts	823.27		
2005 CD editor costs	490.00		
Expenses total		$ 28,165.81	
Cash Ending December 31 2006			$ 65,929.65
US Certificate of Deposit			35,245.52
US Current Account			1,029.32
UK Dollar Account			9,983.18
UK Sterling Account			19,671.63
Cash Ending December 31 2006			$65,929.65

SIG ANNUAL REPORTS

List of Active SIGs and (Report Received)
Business Industrial Systems Applications (YES)
Hierarchy Theory (NO)
Duality Theory (NO)
Systems Philosophy and Systems Ethics (NO)
Systems Modelling and Simulation (NO)
Futurism and Systems Change (NO)
Meta-modelling and Systems Epistemology (NO)
Systems Psychology and Psychiatry (NO)
Information Systems Design (NO)
Research Towards a General Theory of Systems (NO)
Medical and Health Systems (NO)
Living Systems Analysis (YES)
Designing Educational Systems (NO)
Spiritualty and Systems (NO)
Human Systems Enquiry (NO)
Critical Systems Theory and Practice (NO)
Evolutionary Development (NO)
Evolution and Complexity (NO)
Applied Systems and Development (NO)
What is Life/Living (NO)
Women and Children (NO)
Systems Specific Technology (NO)
Organizational Transformation and Social Change (NO)
Systems Pathology (NO)
Student SIG (YES)
Roundtable (NO)

The following SIG reports have been received.

SIG on SABI report, March 14, 2007

Following the pattern of annual meetings, the SIG on Systems Applications in Business and Industry convened two sessions at Sonoma 2006. Since that meeting, members of the SIG have reported the following activities.

Wayne Wakeland is co-teaching “Systems Thinking in Action” to 54 motivated students at the Bainbridge Graduate Institute, which offers degrees and certificates in sustainable business management. “A hybrid simulation model for studying acute inflammatory response” (with G. Macovsky) has been accepted for SpringSim 07, Norfolk, VA.

“Using simulation to evaluate global software development task allocation strategies” (with S. Setamanit and D. Raffo) is in press for Software Process Improvement and Practice in early 2007. “Complexity and sufficiency of equations used to model biomedical phenomena” (with J. Fusion) appears in the Proceedings of the SCTPLS 16th Annual International Conference. With K. Venkat, Wayne has three papers in proceedings: “An agent-based model of trade with distance-based transaction cost” for SCSC06; “Is lean necessarily green?” for the ISSS; and “Emergence of networks in distance-constrained trade” for the International Conference on Complex Systems.

Markus Schwaniger has been most prolific. He published Intelligent Organizations: Powerful Models for Systemic Management (Springer, 2006). In Systems Research and Behavioral Science, he had three articles: “System Dynamics and the Evolution of the Systems Movement”; “Second-

order Intervention: Enhancing Organizational Competence and Performance" (with Matej Janovjak and Kristjan Ambroz); and "Theories of Viability: A Comparison".

In Wirtschaftskybernetik und Systemanalayse, (Duncker & Humblot 2006), Markus contributed "Das virtuelle Klassenzimmer - eine interkulturelle Brücke?" "From Dualism to Complementarity: A Systemic Concept for the Research Process" has been accepted by the International Journal of Applied Systemic Studies (IJASS) and is forthcoming. "Design for Viable Organizations: the Diagnostic Power of the Viable System Model", was published in Kybernetes, and "The Evolution of Organizational Cybernetics" was published in: Scientiae Mathematicae Japonicae. "A Model of Systemic Control" appeared in Computing Anticipatory Systems, Proceedings CASYS'05-Liège (Dubois, Daniel, ed), and was awarded the best paper award for 2006 by the American Institute of Physics. "The Quest for Ecological Sustainability: A Multi-level Issue", was published in Cybernetics and Systems.

Eduardo Oliva Lopez has just published two books on "problem characterization" for postgraduate students. The titles are: Piensa visualmente y logra tus metas (a managerial approach), and Logra tus metas con un plan realista (for young graduates). Both will be published in English later this year.

Sung Chull Kim has published a book, North Korea Under Kim Jong Il: From Consolidation to Systemic Dissonance (State University of New York Press, 2006), and with Edward Friedman, edited Regional Cooperation and Its Enemies in Northeast Asia: The Impact of Domestic Forces (Routledge, 2006).

Pamela Buckle (becoming Pamela Henning Buckle, with her wedding this month!) has a version of her "Obstacles to consciousness in corporations" paper, first presented at the Sonoma meeting, under review with Systems Research and Behavioral Sciences. A paper titled "Detecting self-organized behavioural patterns in workplace settings: Integrating practice with theory" will be published in an upcoming issue of the Journal of Organisational Transformation & Social Change. With S. Dugan, she has also written a chapter titled "Leaders' detection of self-organized patterns in the workplace" for an upcoming book on leadership and complexity. Pam was elected to the ISSS Board last year, and is serving as Secretary and VP for Protocol.

Enrique Herrscher's major task for 2006 was, with Maurice Yolles as co-editor, the ISSS Yearbook, including selected papers from the Cancun annual meeting. In this issue of Systems Research and Behavioral Science, he also contributed a guest editorial on "Systemics: Knowledge or Passion?" A special edition of Systemic Practice and Action Research containing selected papers from the 2006 Systems Conference organized by the Brazilian Systems Group included Enrique's paper on "What is the Systemic Approach Good For?" "In Praise of Contradictions was published in 80/20, an academic journal of the Instituto Superior de Carreras Empresariales y Ambientales of Argentina.

In 2006, Enrique was featured in many lectures: "Knowing, Feeling, Planning, Acting, Five Motors to Improve the Reality Systemically", at the Fundación Argentina para el Talento y el Ingenio in Santiago del Estero; "A Systemic Approach of Strategic Planning, for the Association of Industrial Engineers of Cochabamba, Bolivia; "Planning at the Furthest Southern City of the World, at the Universidad Nacional de la Patagonia San Juan Bosco (UNPSJB) at Ushuaia, Argentina; "Education and Work from the Perspective of Complexity, at Feria Internacional del Libro in Buenos Aires; "An Introduction to Systemic Thinking for Health Organizations", at the Pontificia Universidad Católica Argentina "Santa María de los Buenos Aires"; "The Systemic Approach at the Service of the Socioeconomic Reality of the Region and its Organizations", at the Universidad Nacional de La Pampa; and "Difficulties for the Diffusion of Systemics: Challenges and Opportunities", for the First Regional Meeting of ALAS, the Latin American Systems Association. Enrique was an invited professor on the course on "Systems Theory and Strategic Planning" at the Master Program of Public and Private Strategies of Universidad Nacional de Córdoba (UNC), Argentina.

As for myself, I have temporarily reduced my day job with IBM Software Group to part-time status (80%), to serve as a senior researcher with Rendez research project in Finland. This project is co-led by Taina Tukianen at Helsinki Polytechnic Stadia, and long-time SABI member Minna Takala from Nokia. A research meeting in January in Finland, included SABI members David Hawk, Marianne Kosits, Annaleena Parhankangas and Gary Metcalf. See the photos at http://rendez.org , or on my blog at http://daviding.com .

I look forward to seeing you at Tokyo 2007 in August!

David Ing, Chair, Special Integration Group on Systems Applications in Business and Industry

Living Systems Analysis Special Integration Group

2006 Activities

The 50th Anniversary Meeting of the ISSS

Five papers were presented at the 50th meeting of the ISSS. All five papers relate to Jim Miller's living systems theory.

Th first paper presented was "Social Entropy Theory, Macro Accounting and Entropy Related Measures" by G..A. Swanson and K. Bailey. The paper extends one co-authored by Swanson, Bailey and Miller (1997) that emphasized the role of money markers in the recurring organization and disorganization of social systems. Swanson and Bailey's paper provides logic statements, mathematical or otherwise, linking the various entropy-related measures. The chief good of the paper is to identifying similarities and dissimilarities among the entropy-related concepts that concern different types of systems. Swanson's macro accounting theory and Bailey's Social Entropy Theory (SET) are integrated into Miller's Living System Theory to produce a synthesis of entropy related concepts.

The second paper presented was "Achieving the Sustainable Development Through the World" by Hyuk Kihl Kwon. The paper addresses sustainable developments at the local and global levels. These levels are related to Miller's community and supranational levels. Kwon treats the many problems that need to be solved to achieve sustainable developments throughout the world. He critically examines the major limitations of the model for dealing with environmental factors. He concludes by making some suggestions on ways toward sustainable development

The next paper presented was "The Current Relations between two Koreas and Matter-Energy Flow" by Youn-Soo Sim. The paper states that recently, the two Koreas have been trying to improve relations with each other in many subsystems. That development, in the exchange of matter-energy and information in many subsystems, is expected in the long run to contribute to achieving the reunification of Korea,. In this sense, it is very significant to take a close look at the subsystems that process the energy and information in the current relations between South an North Korea. The exchange extension among inter-Korean subsystems has played an important role in easing the tension on the Korean peninsula. The main objective of the study, then, is to examine the variety of subsystems in regard to the South-North relations from 2003 to 2005, and to analyze the exchange shift of matter-energy and information among inter-Korean subsystems by using the model developed by James Grier Miller

The next paper presented was "Early Social Innovations: Belief Systems" by James Simms. This paper addresses the next phase in the development of living systems science, which includes the science of society. The principles of this science have been developed. The next phase of the science is an elaboration of the social innovations determinant of the science of society. Early social innovations are belief systems. The basic phenomenon causing the need for belief systems is the increased size of the human brain since the emergence of Homo sapiens. The large brain resulted in two fundamental phenomena, the concepts of mortality and rational behaviors. The concept of mortality and the genetically determined need for survival resulted in the concept of an afterlife

(immortality). Some early humans invented belief systems based on the concept of an afterlife. The concept of rational behavior (reason for things that happen) resulted in the belief that some thing or things cause events to occur. It is hypothesized that the mortality and rationality phenomena resulted in the innovation of belief systems and the religions to implement these belief systems. These hypotheses are tested using artifacts of ancient humans and recent primitive humans.

The last paper presented was "Evolutionary processes in Living Systems" by Lane Tracy. Living systems encompass both biological and social systems. The genius of living systems theory lies in finding common processes at work at such diverse levels as cells, organs, organisms, groups organizations, communities, societies, and supranational systems. Furthermore, living systems theory postulates that the commonalities result from a process by which each level evolves—"frays out"—from a lower level. Evolutionary processes in biological systems are well known and thoroughly documented. In this paper Tracy proposes to demonstrate that the same processes operate in social systems. In short, Darwinian evolution is a shared characteristic of all levels of living systems. Evidence of evolution is examined at the level of groups, organizations, communities, societies, and supranational systems.

Living Systems Theory Session at the Eighteenth European Meeting on Cybernetics and Systems Research in Vienna.

Living systems theory group members were invited to participate in the eighteenth European meeting on cybernetics and systems research. G.A Swanson and K. Samuelson chaired the session. There were nine papers in the session. (1) "The Dynamics of Purpose as Defined in Living Systems Theory" by G. A. Swanson. (2) "Miller's Cross-level Hypothesis as a Guideline for Understanding Mankind-planet System in the Making" by C. Francois. (3) "The Quest for Ecological Sustainability: A Multi-level Issue" by M. Schwaninger. (4) "Modeling Function Information in Engineering Design" by F.S. Cowan, J. Allen, F.. Mistree. (5) "Improving Motivation Theory and Practice through application of Living Systems Theory" by L. Tracy, (6) "Relonics Properties of Living Systems" by V. Kvitash and B. Gorbis, (7) "Emergence of Living Systems Science" by J. R. Simms, (7) "The Theory of "Life's Complex Systemicity", by J.-J. Blanc, (9) "Cybernetics in Plants" by F. Zucconi.

Several informal meetings were held in Vienna to discuss the direction or directions living systems should take in the future. Two directions .are application of Miller's Living Systems, and the development of a living systems science. It was agreed that this discussion should continue at the Japan meeting of the ISSS.

The SIG for Students was successfully reestablished at the 2005 ISSS conference in Cancun, Mexico. After previous attempts to solidify the group several years prior, the group received sufficient support from the Society's members and interest from multiple students.

The SIG for Student is unique in that it welcomes students from all fields to engage in collaborative dialogue. It was re-formed to cultivate the role of younger generations of emerging systems thinkers within the ISSS. The group fulfills outreach and feedback needs of the society.

The SIG for Students acted as both a fully functional SIG and as an orientation for new members. The group met several times during the conference to discuss their own works, and also acted as a valuable source of feedback to the rest of the Society. The walls of the SIG for Students's room acted as message boards where major topics of the conference were highlighted, members expressed their thoughts, and students' reflectioned on the significant ideas that emerged from various speakers and other SIG sessions. The new SIG also provided opportunities for students to network with their peers and connect with professional members— previously, an intimidating task.

This year's upcoming conference at Tokyo Institute of Technology in Japan promises another good student attendance. With continued support and initiative from such members as Alexander and Kathia Laszlo, Lezlie Kinyon, Gary Metcalf, Jim Kijima and former President Enrique Herscher, the SIG for Students will be a perennial group.

International Society for the Systems Sciences
Presidential Action Plan
July 2006 – July 2007
Kyoichi J. Kijima

As required by the ISSS bylaws (4.6.3.2), I am presenting the following Plan of Action for the term of my presidency. By taking advantage of the fact that I am President from outside the US, I would like to promote in the ISSS, integration between the cultures, harmony between theorists and practitioners, and fusion among generations. The following items outline my primary goals during the term of my presidency. Some specific plans set for the 51st Annual Meeting of the ISSS will be distributed in a separate leaflet: "Call for Participation".

Now that fifty years have passed since the Society was established, I believe it is the first priority over everything else to attract the next generation to systems-related research. Intake of the young generation is certainly a key for enhancing our society. To this purpose, I will work closely with the President Elect, Gary Metcalf, to map out consistent long-term strategies. To stimulate their participation and research presentations, I will introduce to the 51st Annual Meeting at Tokyo a financial support scheme for young, promising researchers/students, depending upon budgetary constraints (See 3. below). I will also work closely with the Vice President for Membership and Conferences as well as the Student SIG.

Since I think it is also one of my primary tasks to promote the activities of the society to all potential but relevant researchers/practitioners all over the world, I intend to enhance the content of the ISSS website as the primary vehicle for communication. By closely working with the Vice-President for Education and Communications, David Ing, and the SIG chairs, I will make the overall organization of the society more transparent and will articulate more clearly the general focus of the various SIGs.

To organize the 51st Annual Meeting at Tokyo in 2007, I have been fortunate in obtaining financial support from the Ministry of Education, Culture, Sports, Science and Technology, Japan, in the framework called the COE (Center Of Excellence) Program. It will quite sufficiently provide compensation for administrative and other support for the meeting as well as scholarship to young researchers/students and participants from developing countries.

I have also submitted a grant proposal to one of the programs of the Japan Society for the Promotion of Science (JSPS), which corresponds to the National Science Foundation in the US. The program funds a limited number of conferences and meetings each year. The primary purpose of the fund would be to provide honoraria and/or travel expenses for plenary invited speakers.

In addition, I plan to promote a new research area called Agent-based Social Systems Sciences (ABSSS). Assuming that some holistic structure or characteristics should emerge from interaction among autonomous decision makers, or agents, the ABSSS tries to establish innovative social science for the grand design of organizations, business, and politics in the 21st century. It takes a bottom-up approach following the three phases in a spiral way: i.e., 'theory and modeling', 'simulation', and 'empirical validation'. I myself play an important role as the sub-leader of this program by advocating Decision Systems Science.

We will invite distinguished plenary speakers from government, industry and academia, inside and outside the Society. At this moment, Soho Machida, a Buddhist Priest and a Professor at Hiroshima University, has already agreed to give a talk about "Polytheistic Cosmology of Japanese Religion".

The Bela H. Banathy Prize for excellence in systemic teaching, proposed by Enrique Herrscher and Debora Hammond, is such a good idea that I will explore the idea in collaboration with the ISSS council.

International Society for the Systems Sciences
Presidential Action Plan
July 2007 – July 2008
Gary S. Metcalf

As required by the ISSS bylaws (4.6.3.2), I am presenting the following Plan of Action for the term of my presidency.

I will work closely with the Vice President, Administration, the members of the Board of Directors, and the Board of Trustees to strengthen the organizational structure of the ISSS. This includes:

Clarifying the roles of the president and other officers in relation to responsibilities for conferences and meetings;

Assuring that an organizational function exists which provides continuity for the planning and execution of the conferences, and;

Developing a strategy for the ongoing funding of the organization and its activities.

I will work to strengthen the connections between the ISSS and other organizations, including:

Other systems organizations;

The institutions and organizations of which our members are parts (universities, corporations, NGO's, etc.);

Organizations which can contribute to the work of the ISSS, and;

Organizations which need or can benefit from the work of the ISSS and its members.

I will work closely with the Council to assure that there are opportunities to foster and accommodate current and relevant systems ideas of all kinds within the structure and activities of the ISSS. I will also work with the Council to align the subgroups (i.e. Special Integration Groups and others) in ways that bring coherence and ease of understanding about ISSS research to both members and prospective members of the organization.

I will work with the Treasurer and VP for Funds, along with the Boards of Directors and Trustees, to establish new means and sources for funding the organization, with the goal of creating at least one to two years of financial reserves for ongoing operations.

I will work with the Student SIG to continue to expand our outreach to students, and to target their membership and involvement as a key source of growth for the ISSS.

SECTION FOUR
MEMBERS' BULLETIN BOARD

NEW BOOK

Maurice Yolles, 2006, Organizations as Complex Systems: an Introduction to Knowledge Cybernetics, Information Age Publishing, 865 pages.

This summary has been taken from a recent announcement in Kybernetes:

The book attempts to develop a comprehensive theory of social collectives as complex systems. Not only does it utilize ideas and frameworks already familiar to complex system researchers, but it also incorporates other perspectives (such as third order cybernetics, viable systems theory and social constructivism, as a few examples) some of which the reader may not already be aware of, and some of which the reader may be surprised to learn are not disparate and disconnected.

The book is set out into the author's preface, a comprehensive introduction and the five parts: fundamentals; complex organizations; knowledge and cybernetics; the cybernetics of communication; and social behavior. Under these headings there are 16 chapters arranged in a structured format. Where necessary most have an introduction to the chapter contents and a useful summary at the end. Notes, references and an index are also included.

The publishers summarize the contribution they believe the book will make. They say that it: … develops a cybernetics theory of the organization as a complex autonomous and self-organizing, self-creating social community, and in so doing it will set the scene to discuss a variety of aspects of organizational and social processes and forms that arise from a systemic view.

Readers will agree that this book will also deliver an appreciation of the nature and use of information, knowledge and intelligence to assist the management of social communities. It will make a worthy contribution to the Managing the Complex series which is an ongoing one that has much to offer cyberneticians, systemists and management scientists.

The book is available from:

http://isce239.securesites.net/~isce239/isce.edu/catalog/product_info.php?products_id=47 <http://isce239.securesites.net/~isce239/isce.edu/catalog/product_info.php?products_id=47>

http://www.infoagepub.com/products/series/titles/1-59311-433-8.html

A paperback version is intended for later this year.

JOHN N. WARFIELD

John N. Warfield was awarded the Joseph G. Wohl Award for Career Achivement at the 2006 annual meeting of the IEEE Systems, Man, and Cybernetics Society. This is the highest award given by the society, and is not awarded every year. It is only given when there is a clear indication of a deserving candidate, according to the society's regulations. The stated purpose is:

"To recognize outstanding professional contributions to systems engineering concepts, methodology, design, education, or management".

Warfield was the founding editor-in-chief of Systems Research and was president of the Society for General Systems Research (predecessor to the ISSS).

BERTALANFFY CENTER FOR THE STUDY OF SYSTEMS SCIENCE ONLINE!

In December 2004 a group of scholars met in Vienna who were tied together by the attempts to save the Bertalanffy archive for the public which suddenly – in spring 2004 – appeared in the United States for auction (see Chroust, G., Hofkirchner, W.: Ludwig von Bertalanffy returns home. Systems Research and Behavioral Science 23/6, 701-703). It was the constitutional meeting of the Bertalanffy Center for the Study of Systems Science (BCSSS).

Six banana boxes containing letters of Ludwig von Bertalanffy from after World War II when he left Austria to 1972, when he died, and a lot of books which belonged to his private library in Buffalo have been the focus of the activity of the new research center. All items were archived and have now to be made available to the public for free by Internet. The homepage though still work in progress is now online (http://www.bertalanffy.org/).

The letters have already been researched by David Pouvreau who works on his dissertation on Ludwig von Bertalanffy and the origins of Bertalanffy's ideas at the EHESS in Paris and the results shaped the biography he authored. This biography can be downloaded from the website in French. An English version will be available by spring and form the first volume of a book series of the BCSSS. A second volume is envisaged which will contain results of a project on the origins of systems thinking in biology – a project which started when famous biologist and evolutionary epistemologist Rupert Riedl was still alive and worked as project co-ordinator.

The archive itself received finally its place at the follow-up department of the Zoological Institute of the University of Vienna where Bertalanffy was teaching during the war – the new Department of Theoretical Biology led by Gerd MŸller who is chairman of the board of directors of the Konrad Lorenz Institute for Evolution and Cognition Research. Last year the BCSSS became member of the IFSR.

Given the global challenges of today, systems science is needed more than ever. Yet system theory is not mainstream. The objective of the BCSSS is to inspire the development of systems science by working as a clearing house for research projects throughout the systems community. In particular, it revisits General System Theory (GST) as founded by Ludwig von Bertalanffy, Anatol Rapoport who passed away last January, and others in order to reassess it in the light of today's global challenges and to illuminate the course of development systems science has taken since. Its ambition is to further reflections on what the present system schools have in common and on what the complexity of real-world problems urges system thinking to consider.

The Bertalanffy Center is open for members of the systems movement, be they individual or organisational, who have an interest in promoting metatheoretical thinking. The Ukrainian Synergetic Society is the first scientific society that asked for membership in the Bertalanffy Center.

The BCSSS is an association by Austrian law. Its domicile is Vienna, Austria. The following scholars in alphabetical order are members of the board:
- Gerhard Chroust, University of Linz
- Peter Fleissner, Vienna University of Technology
- Wolfgang Hofkirchner, Vienna University of Technology and University of Salzburg (President)
- Elohim Jimenez-Lopez (Vice-President)
- Gerhard Muller, University of Vienna
- Franz Ofner, University of Klagenfurt (Treasurer)
- Gunther Ossimitz, University of Klagenfurt (Secretary)

Celebrating 25 Years of the IFSR – A Milestone in the Systems Sciences
Gerhard Chroust

The terrible events between 1914 and 1945, World War I, the World Economic Crisis and World War II, induced scientists like Ludwig von Bertalanffy, Norbert Wiener, W. Ross Ashby, and their colleagues to offer a way out: holistic rather than fragmented thinking, leading to two new sciences: Systems Theory and Cybernetics.

In 1980 the International Federation for Systems Research (IFSR) was founded as a federation of all systems societies. The celebrations of its 25th Anniversary gave a chance to look at the successful history of the IFSR and on the current and future state of the Systems Sciences.

The celebration of the 25th Anniversary of the IFSR in Vienna on April 19, 2006 during the European Meeting of Cybernetics and Systems Research opened with a presentation of the IFSR by its Secretary General, Prof. Gerhard Chroust, University of Linz, Austria, describing aims, goals, structure, projects and achievements of the IFSR. Then the designated president of the IFSR, Prof. em. Matjaz Mulej, University of Maribor, Slovenia, held the traditional Ross-Ashby-Memorial-Lecture.

The rest of the day was devoted to a review of past and present activities of the IFSR and an outlook into the future.

Matjaz Mulej chose the title “Systems theory – a worldview and/or a methodology’’ and argued that the immensely growing knowledge of humankind causes unavoidably narrow specialization of individuals, every profession working in a partial fields. Knowing and using parts alone rather than wholes is not enough. Warnings about the problem of oversights, one-sidedness, and their consequences have been voiced already millennia ago, but remained un-heard and neglected by specialists of different professions who do not recognize that specialisation is not sufficient.

Systems thinking is a world view, as Ludwig von Bertalanffy (1901-1972), an Austrian/American biologist and the father of General Systems Theory emphasized, not a profession. It is a matter of education, values, culture, ethics, and norms of behaviour, added to every single professional knowledge.

Recognizing that one needs a synergetic cooperation of all scientific societies working on systems theory and cybernetics in order to respond to the global problems, the IFSR was founded on March 12, 1980 with support of the Austrian Federal Ministry for Science and Research. The first members were:

The Society for General Systems Research (now ISSS). Its president, Prof. J. Klir, USA, became the first President of the IFSR,

The Austrian Society for Cybernetic Studies. Its president Prof. Robert Trappl, Austria, became the first Vice-President of the IFSR.

The Systeemgroep Nederland. Its representative, Prof. Gerard de Zeeuw, Netherlands, became the first secretary treasurer of the IFSR.

The aims of the Federation were to stimulate all activities associated with the scientific study of systems and to co-ordinate such activities on the international level.

Since 1980 the Federation has grown to 32 members from 25 countries on all continents. Past and present major contributions to the field of systems research are:

The Journal of Systems Research and Behavioral Science (Editor in chief: Prof. M. C. Jackson), publishing original articles on new theories, experimental research, and applications relating to all levels of living and non-living systems.

The IFSR International Book Series on Systems Science and Engineering (Editor in Chief: George Klir), founded in 1985, publishing high quality scientific publication on Systems Sciences.

The Fuschl Conversations (started in 1980 by Bela. H. Banathy), providing an alternative to conventional conferences by being a collectively guided disciplined inquiry into issues of social/ societal significance by scholarly practitioners in self-organized face-to-face teams

Since 1980 they have been held bi-annually in Fuschl, near Salzburg, Austria and replicated in many other places to an estimated total of 40 or 50.

The First International Congress of the IFSR (Nov. 14 – 17, 2005 in Kobe, Japan) was the first international systems conference in Japan. It established a foundation for understanding and collaboration between Japanese and non-Japanese systems professionals.

The Ross-Ashby-Memorial-Lecture at the bi-annual EMCSR-Conferences, sponsored by the IFSR.

Homepage and Newsletter (Editor in Chief and Web-Master: Prof. Magdalena Kalaidjieva, now Prof. G. Chroust).

Recent and current projects:

Acquiring, archiving and scientifically analysing the Ludwig von Bertalanffy Legacy in cooperation with the Bertalanffy Centre for the Study of Systems Science, Austria (Prof. Wolfgang Hofkirchner, Salzburg).

An electronically accessible International Encyclopaedia of Systems and Cybernetics based on Charles François' book version (Prof. Günther Ossimitz).

Planning an Academy of Systems Sciences and Cybernetics (Prof. Jifa Gu and Prof. Matjaz Mulej)

Collecting and analysing data on courses in Systems Sciences to develop a basic common core (Prof. G. A. Swanson.

Networking the archives of pioneers of systems science and cybernetics (Prof. Gerhard Chroust, Gary Metcalf).

Connecting systems scientists in Asia and the West (Prof. Jifa Gu).

The anniversary event was filmed and the outcome will be published as DVD-video in 2007.

Contact: IFSR homepage : http://www...ifsr.org

Italian Systems Society
www.AIRS.it Rome,
October 7, 2006
Manifesto Towards a New Generation of Systems Societies

We are living times in which there is a large number of societies around the world formally and explicitly devoted to Systemics, intended as corpus of Systemic principles. They reflect the existence of an archipelago of expressions, concepts and approaches related to Systemics and defined at a very different levels of precision and angles of observation, such as Systemic principles, Systemic approach, Systemic properties, Systemic problems, Systemic, Systems Dynamics, Dynamical Systems, Systemics itself, Systems Theory, Systems Thinking, Systemic View, General System Theory and Living Systems Theory. Their activity is often based on generic assumptions produced by lack of rigour and precise definitions of the concepts used, often defined in very different ways. This is one of the reasons why there is no comprehensive theoretical Introduction to General Systems Theory available in the literature, but, rather, introductions stemming from disciplinary contexts. It would be more appropriate to speak of a history of systems thinking and a collection of approaches having some common features, but these are still far from allowing the establishment of a general theory. Systems societies have thus progressively adopted a generic rather than general approach to systems, while the challenge was precisely that of developing a

theory of generalization. This is well represented by the focus placed on very old ideas, such as contrasting soft and hard approaches, qualitative and quantitative in an age of increasing interdisciplinarity (i.e., same properties considered in different disciplinary contexts). The practice of interdisciplinarity is often confused with popularizing and convincing. The use of stereotyped concepts, neither supported nor updated with knowledge of current research, is often used to deal with complex issues in an incompetentand superficial way (i.e., without supporting disciplinary knowledge), hidden by the pretension of judging the systemic content of a given field.

One example is the usage of the concept of conventional science to refer to specific disciplinary contexts ignoring how they produced, within their context, several fundamental systemic results by using interdisciplinary models and tools. These include the concepts and theories of phase transitions, dissipative structures, Synergetics and emergent computation (subsymbolic) as in Neural Networks and Cellular Automata. Other examples relate to the usage of precise mathematical properties, such as non-linearity and isomorphism in a metaphorical way with the purpose of making generic considerations sound scientific.

Systems societies often do not keep up with how disciplinary research is currently carried out. They assume that disciplines are those of von Bertalanffy's times, which, unfortunately, are still taught in schools. Dealing with problems of systemics has often been a way out of avoiding disciplinary knowledge. We believe thatdisciplinary knowledge is a necessary, although not sufficient condition for dealing with systemics. So-called reductionism, the enemy par excellence of systems societies, is no longer an oversimplifying and thus ineffective approach based upon the assumption that the macroscopic level can be explained by the microscopic level and thus ignoring processes ofemergence.

Reductionism assumes the possibility of reducing problems of a specific discipline to those of another (not necessarily simpler, but at another level of description) such as reducing behaviour to synapses, psychology to neurology and life to molecular biology. Usage of reductionism only is to be intended no longer as incorrect conceptual formulation, but rather as a problem of ignorance. The crucial point is thatsystemic knowledge (necessary for dealing with processes of emergence) is not based onavoidance of knowledge at the level of partitions as assumed by the observer to study the system. On the contrary, a systemist should have competence at the different levels of description. Competence at the systemic level should not be an excuse for having no competence or no appreciation for the microscopic level. By not dealing with new scientific, approaches and fundamental epistemological questions, systems societies have often become self-referential, without a cultural and scientific identity driving, at the best, towards a generic will to collect different approaches. A robust theoretical and thus general, trans-disciplinary (i.e., systemic properties are considered per se, discipline independent) line of research in systemics may consist of dealing with the theoretical problems of emergence taking place in different disciplinary contexts.

These considerations highlight how systems societies are not the owners of Systemics, in a situation where systems research is mainly performed outside the traditional world of systemics and within interdisciplinary initiatives. In the literature there is a large number of papers and books, as well as conferences and workshops, all related to the activity of systems societies and often all equivalent, i.e., without introducing new, even controversial, paradigm shifts, new approaches and views. The systems community may be then considered as conservative, using and re-using stereotyped and never reviewed concepts such as "the whole is more than the sum of its parts". This conservativeness contradicts the original purposes of the founders.

It is time for some fresh air. On the other hand, there is a very large production of books and papers outside the range of influence of systems societies, with intensely innovative systemic content, in almost all disciplinary fields, using interdisciplinarity not as an ideological, pre-established approach, but because of the impossibility of avoiding the interdisciplinary representations of problems and the usage of models and simulations based on the concept of system. The level of complexity is such to call for an interdisciplinary, systemic approach.

The purpose of systems societies should be to identify and, where possible, produce contributions to systemics taking place in disciplinary and multidisciplinary research, making them general and producing proposals for structuring and generalizing disciplinary results. Examples of theoretical aspects of such an effort is that towards the establishment of a General Theory of Emergence, a Theory of Generalization, Logical Philosophical models related to Systemics and the issue of Variety in different disciplinary contexts.

A Report on a Course: Comparative Systems Analysis 411: General Systems Theory I Offered by Len Troncale, PhD, California State Polytechnic University, Pomona, Fall Term, 2006

Lynn Rasmussen, MA, lynn@lynnras.com

One of the difficulties of being systems practitioners is that we don't fit into the recognized categories or disciplines in corporate, governmental, or academic settings. Also, we experience different aspects of systems thinking and systems practice, but rarely have an opportunity or the time to consider the various systems processes, what exactly they are and how they work together.

This course offered its participants the luxury to focus together on the basics, a few processes at a time, on what will eventually be recognized as the taxonomy of systems science. The invitation to the course described it as "a comprehensive introduction to the emerging new field of systems science." For the Fall term, 2006, on Fridays at 1 p.m., Pacific time, nine people from four different states met by telephone bridge line to discuss readings from systems workers as diverse as Strogatz, Miller, Bar-Yam, Prigogine, Allen, and, of course, Troncale.

Last year Brian Meux, Todd Bowers, and I (and a few other CSU Pomona students) began Len Troncale's CSA 411 course following the 2005 ISSS meeting in Cancun. We spent the 2005-2006 academic year, three terms, focusing on 11 or 12 systems processes and touching upon the more than 80 processes found in Troncale's System of Systems Processes (SSP). Readings were suggested from a bibliography and there was no set curriculum. Meeting by telephone, using Blackboard, wiki technology, and the CSU Pomona online library, we formed the curriculum in the process of doing the work. We produced a series of posters and presentations and a workshop for the annual ISSS meeting in Sonoma.

After Sonoma, we decided to repeat the same course, this time with an increased capacity to synthesize the information and to add data to our newly formed wiki database. We announced the course to the participants of our preconference workshop in Sonoma and picked up some great new students: Curt McNamara and Aaron Doherty from Minnesota, Luke Friendshuh from Utah, Les Vogel from Maui, and Robert Hartman from Pomona.

The first week we covered the basic definitions for isomorphies (systems processes found in all mature complex systems) and linkage propositions (the relationships among isomorphies), their groupings into systems mechanisms, and the structure of the SSP. The next three weeks we read and discussed works from chapters and papers on hierarchical structures and processes; then for three weeks emergence, chaos, and origins; and, for the final three weeks, cycles, oscillations, and synergy.

We chose our own readings for each isomorphy and then looked for the isomorphy's identifying features and characteristics, comparative definitions from different systems workers, their relationships to other processes (linkage propositions), pathologies associated with the process, and their application or praxis, along contributing literature sources, systems workers and education institutions. This was all recorded in our individual papers, which are incorporated into the csawiki database.

In addition, Len produced two inspiring power point presentations, one on integration/diversification cycles across the history of the universe and the other on a unified theory of emergence. Both

included considerable detail from conventional sciences. They were produced in the university's studio and placed on the web via Blackboard where they could be viewed by streaming video.

Discussion was lively and sometimes deep, with insights from engineering, biology, psychology, computer science, religion, and more. Because of our diverse backgrounds, when questions came up—and they were continually coming up—at least one person in the group was able to apply it to his or her experience in a given field to help us all reach a greater understanding of the general process. We debated and discussed such issues as the role of chaos in bifurcations vs. the role of bifurcations in chaos, the concepts of structure vs. process, the different and inaccurate uses of terms like "emergence" in the science literature, the subjective vs. objective nature of systems particularly in regard to hierarchy theory, and even got caught up for a while in the concept of ritual in human systems.

In the final class we discussed the value of the course. For new students the concepts of this class involve different ways of thinking and require some experience to be recognized and then effectively integrated into practice. The constructivist (vs. instructivist), discovery format allows for this deepening experience. All voiced the desire to continue to the next term if work and study schedules allow.

We were also pioneering a course format. We used a free online conference calling service (http://www.powwownow.com) that linked us into one conversation via telephone. Occasionally someone's telephone connection interfered but for the most part the line was clear. Meeting together required an etiquette that developed over the weeks of the course. By the end of the quarter our methods were adequate, but there is room for improvement. Next term we will digitally record the course and we will present our papers, charts, and web page links on the web so that they can be viewed by participants in real time. We may also use simple blogging technology to make tracking conversations between classes easier.

We continue to record data into csawiki. Access to the general public is closed, but the database will form the references for the publication of a systems text and then maybe it can be opened for wider contribution and use.

A text may make learning easier for future students, but the experience will certainly not be as rich. I feel blessed to be in the ground floor of this exciting work and plan to continue for the rest of the year.

Join us next term, beginning the first week of January, 2007, or if it's too late, then join us in Spring, 2007 (Contact lrtroncale@csupomona.edu or lynn@lynnras.com). Look for our updated poster and SIG presentations in Tokyo and future workshops. The taxonomy of a new science is emerging. The future looks bright.

NEW WEBSITE

A General Systems Theory materials have been uploaded at www.unificationtheory.com that models the Universe and all its quantic parts as a fractal super-organism. For those interested, once within the web you can click in the words of the Universal Postulate/equation: E<=>T, 'All what exists is a fractal super-organism with an energetic body and an informative head that exits 3+i cycle: 1-light, 2-forces.....5-man ... 7-Galaxies...' and you will find an homologic description of all the bodies, informative networks and cycles of themain species of the Universe and its 9 scales... If you click in the 5/6th scale of humanity you will find a detailed description of the super-organism of History and each of its cultures and ages from past to future, defined by the same Universal Postulate: Our Wor(l)d is History, the Human super-organism, living 3+i ages...' The interesting point of this model is that with some simple changes in the concept of time (from lineal to cyclical) and space (from continuous to quantic), that define the nature of a fractal super-organism, we can describe any system, network or species of the Universe with the same parallel properties. Since I am not a native english speaker, nor anyone can be a specialist in all sciences, you will find some syntactic and

semantic errors on the web. But i believe beyond those minor mistakes the model can fullfill when properly developed in all its detail by different specialists of each science, the promise of a unification of all sciences that inspired our founding fathers. Please if you have any comments, or want to collaborate in the expansion of the web with some article on a specific subject or science, feel free to write to Luis Sancho at homo@europe.com or visit the website at www.unificationtheory.com

JOURNAL CALLS FOR PAPERS

International Journal of Information Technologies and the Systems Approach (IJITSA). An Official Publication of the Information Resources Management Association (IRMA).

The International Journal of Information Technologies and the Systems Approach (IJITSA) is an academic and practitioner journal created to disseminate and discuss high quality research results on Information Systems and related upper and lower level Systems as well as on its interactions with Software Engineering, Systems Engineering, Complex Systems and Philosophy of Systems Sciences issues, through rigorous Theoretical, Modeling, Engineering or Behavioral studies in order to explore, describe, explain, predict, design, control, evaluate, interpret, intervene and/or develop organizational systems where Information Systems are the main objects of study and the Systems Approach - any variant - is the main research method and philosophical stance used.

SUBMISSION AND REVIEW PROCESS:

1. Due to the semester-based periodicity of the journal, the call for paper submission will be announced for each issue. Potential authors are asked to submit their manuscripts for possible publication by e-mail as a file attachment in Microsoft Word or RTF (Rich Text Format) to the Editor-in-Chief Professor David Paradice at the e-mail address:

dparadice@cob.fsu.edu <mailto:dparadice@cob.fsu.edu>

With copy to Assoc.Professor Manuel Mora (Operational Editor-in-Chief) at

mmora@securenym.net

The main body of the e-mail message should contain: (a) title of the paper, (b) names and addresses of all authors, and (c) area of submission among Information Systems/Technologies, Software Engineering, Systems Engineering, Complex Systems or Philosophy of Systems Science. Manuscripts must be in English language. The author’s name should not be included anywhere in the manuscript, except on the cover page. Manuscripts must also be accompanied by an abstract of 100-150 words, precisely summarizing the mission and object of the manuscript.

Contact the editors for submission deadline information.

Bentham Science Publishers Open Access Journals

Bentham Science Publishers have gained a longstanding international reputation for their excellent standards and top quality science publications. Many journals published by Bentham Science Publishers have received high impact factors in their respective fields. For the current list of publications, please visit www.bentham.org. Seven Nobel Laureates have endorsed a number of Bentham Science's journals; please read their quotes at www.bentham.org/Nobel.htm

The publishers are now undertaking a new publication venture by launching a number of Open Access journals in 2007, devoted to various disciplines in the fields of science and technology.

Open Access Journals are freely accessible via the Internet for immediate worldwide, open access to the full text of articles serving the best interests of the scientific community. All interested readers can read, download, and/or print open access articles at no cost! There is no subscription fee for Open Access journals. The modest open access publication costs are usually covered by the author's institution or research funds. Moreover, authors who publish in our Open Access journals retain the copyright of their article. Open Access journals are no different from traditional subscription-based journals; they undergo the same peer-review and quality control as any other scholarly journal.

The Open Cybernetics and Systemics Journal, a peer-reviewed Open Access journal, aims to publish research articles. Please visit the journal's homepage and Instructions for Authors for article submission at the following website www.bentham.org/open/tocsj

Open Cybernetics and Systemics Reviews, a peer-reviewed Open Access journal, aims to publish comprehensive review articles and mini-review articles. Please visit the journal's homepage and Instructions for Authors for article submission at the following website www.bentham.org/open/ocsr

Open Cybernetics and Systemics Letters, a peer-reviewed Open Access journal, aims to publish recent discoveries and innovations in the form of short communications/letters.

Please visit the journal's homepage and Instructions for Authors for article submission at the following website www.bentham.org/open/ocsl

The journals aim to provide the most complete and reliable source of information on current developments in the field. The emphasis will be on publishing quality articles rapidly and making them freely available to researchers worldwide. All published articles will be deposited immediately upon publication in at least one widely and internationally recognized open access repository.

All published open access articles will receive massive international exposure and as is usually the case for open access publications, articles will also receive high citations.

The journals are essential reading for scientists and researchers who wish to keep up-to-date with the latest developments in the field. The publishers are confident of the journals rapid success.

In this connection I would like to invite you to submit a research article, review article or letter communication to any of the three journals.

If you are interested in submitting an article to one or more of the Open Access journals, then please either refer to the journal Instructions for Authors (the journal websites are stated above) or alternatively contact us by e-mail at tocsj@bentham.org or uroosa@benthamscience.org for submission guidelines.

We look forward to hearing from you soon. Matthew Honan, PhD Editorial Director, Bentham Science Publishers.