SOCIETY FOR CHAOS THEORY IN PSYCHOLOGY & LIFE SCIENCES

KOOPMANS ELECTED FOR SECOND TERM
Election Chair Reports Record Voter Response

NEWS FLASH 16th ANNUAL CONFERENCE
August 4-6, 2006 at Johns Hopkins University

Election Results Reported
Koopmans Re-elected

Jeff Goldstein, Election Chair, reports that more than 25 % of SCTPLS members voted in this Fall's election for Society President. Jeff says this is the largest voter participation in years and represents increased member interest in Society leadership. Matthijs Koopmans and Ivy Lazzarini both attracted significantly higher vote counts than in previous elections, with the incumbent, Matthijs garnering the largest support.

Matthijs' President's Letter, this issue, provides an overview of his plans for the Society. Ivy is busy putting final touches on the INSC meeting in Greece early next year.

SCTPLS Conference Baltimore MD, Summer, 2006

President Koopmans reports that the Society has finalized the location of the annual conference to be held Aug. 4-6, 2006. Next summer's meeting, the sixteenth annual event, will be held on the campus of Johns Hopkins University.

Dr. Koopmans explained that details of the conference are not yet completed but will be posted on the Society website as soon an they are available.

Annual 2005 Conference in Denver a Success
Enthusiastic participation by attendees.

Although somewhat smaller than prior conferences, the Denver conference was no less dynamic. Over 50 submitted papers, four workshops, and invited addresses kept participants active for the three-day event.

See inside for minutes of the Business Meeting and reports of Committees. Abstracts of the conference presentations are archived on the Society website.

WHO'S WHO IN SCTPLS

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President's Letter:
Matthijs Koopmans, President

I am proud to be reelected for a second term as president of the Society. It attests to the strength of this Society that many members voted, and I look forward to another year of exciting activities. We selected Johns Hopkins University as the site for our next annual conference, which will take place on August 4-6, 2006. The engraving, below, is of Lord Baltimore.

A brief synopsis follows of some of the other things we have been working on recently. A new Constitutional Review Committee has been formed to consider the question whether the Society needs to revise its articles of organization. While this may sound very remote and abstract, it's an essential piece of work, which will help the society decide how it can govern itself in the most effective manner. In addition, a new incarnation of the membership committee has already started sending out membership mailings and doing other essential work that will help the Society maintain its vigor. There are separate notices about these two committees elsewhere in this newsletter.

Planning for the International Nonlinear Science Conference, to be held in Crete, Greece (March 10-12, 2006) are in full swing at the moment, and Ivy Lazzarini, the conference coordinator, has a progress report in this issue of the newsletter.

In our ongoing attempt to refresh the Society's website, we are currently developing some new tutorials providing introductions to nonlinear dynamical principles. This is in addition to the very good ones we already have up there. The tutorials address such very basic questions as: What is chaos? What are some examples of how nonlinear dynamical systems are applied in psychology? What is the difference between chaos and complexity? You can find some answers to these questions on our website. With the benefit of a framework that is grounded in mathematics, we as a Society we will continue to provide leadership to the field in this area.

--Matthijs, October 24, 2005

New Constitutional Review Committee is Formed

To address a host of unresolved issues about how we should run our Society, long-term Society members William Sulis (former President), Kevin Dooley (Trustee and former President) and Mary Ann Metzger (former Secretary) have recently agreed to serve on a new Constitutional Review Committee, which will review our Articles of Organization. The issues before this group are important and complex, and include such questions as whether the Society's Treasurer and its Secretary should be elected positions, in which case they would rotate, or nominated positions, as we currently have with appointments for an indefinite period of time. Many of us believe that the way we resolve these issues will affect the long-term survival and growth potential of our Society, and it

is important that we can make a well-informed decision about whether our current Articles will continue to serve us well in the future, and, if not, what should take their place. We expect that the committee will report to us about their progress at the Society's next business meeting at the annual convention.

Sara Ross to Lead New Membership Committee

Sara Ross has accepted the Executive Committee's request for her to lead and form a new Membership Committee.

Sara wrote, in accepting: "I am very pleased to serve in further developing, maturing, and carrying out this important task. I especially look forward to engaging with members to attract others to the Society and help make it a flourishing influence in a world that needs the insights and applications that nonlinear science affords!"

Sara says she is seeking members for that committee, and a notice was recently posted on the members' listserv. Please do not hesitate to contact us if you would like to get involved in the activity of membership building. Few committees are as important as this one.

SCTPLS Forms Strategic Agreement with ISCE Publishing

SCTPLS and the International Society for Complexity and Emergence (ISCE Publishing) reached an agreement in May of this year to broker the sales of each other's journal publications. According to the agreement, SCTPLS will offer 2005 and 2006 volumes of *Emergence: Complexity and Organizations* (*E:CO*) in its book catalog, which will be distributed in this membership year. ISCE will offer the SCTPLS membership package, which includes *NDPLS* plus other items. The two organizations will also swap one page of advertising in *E:CO* for *NDPLS* and the SCTPLS Newsletter for *E:CO*.

Both organizations will retain a small percentage of receipts from sales of each other's materials as a brokerage fee to cover administrative expenses. Each organization will prepare its own ad material. SCTPLS and ISCE will evaluate the effectiveness of this plan after a year.

ISCE Publishing is where much of the content from ISCE Research and ISCE Events is published for wider consumption. *E:CO* is its centerpiece publication, which is an international journal that is read by both academics and scholars worldwide. ISCE Publishing also publishes in collaboration with Information Age Publishing the *Managing the Complex* book series, which made its debut in April, 2005 with its first volume. Volumes 2 and 3 are both expected before the end of 2005. In January 2005 ISCE Publishing also developed the capacity to publish complexity-related book in-house. ISCE Publishing will start offering audio and video papers later in 2005 to further facilitate the dissemination of complexity-related research from around the world. Business functions for ISCE Publishing are managed by Kurt A. Richardson, Ph.D.

EDITORIAL

Dear Newsletter Reader:

The editorial integrity of your Newsletter is under attack. At the request of Prof. Guastello, the Executive Committee passed a motion in instructing me to print, without review or editing, a proposed critique of the Constitutional Review Committee's recommendation to the membership.

We argued that this one-sided request did not meet our editorial responsibility to the membership to provide balanced presentations of controversial topics, and obstructed our duty to editorially review material prior to publication. The Executive Committee denied our proposal to provide balanced coverage and refused to rescind their constraint on our editorial responsibilities. For three months, we have attempted to remedy, through informal means, to affirm the editorial integrity of the Newsletter and to reverse what we believe is an attempt to miss-use the Newsletter. Those efforts have been thwarted. We are, therefore, forced to appeal directly to the membership for support. The following is a summary of events.

In July, prior to the Summer Conference, and just a few weeks prior to the publication of the Conference Program Newsletter, Prof. Guastello, a long-time member of the Society, Treasurer, Journal Editor and Publisher, and Newsletter Production Editor announced in a personal email to us that he was going to include in the newsletter an item that would criticize the work and product of the Constitutional Review Committee (CRC). He said the Newsletter should include his commentary accompanied by the text of the report of the committee. His announcement was a surprise to us since (1) he announced his piece would be included and did not, as is usually the case, request that it be considered as an submission to the Newsletter; (2) he had previously argued forcefully *against* the Newsletter being used for debate of the CRC proposed changes, (3) he had argued against the idea of publishing the report of the CRC at all and (4) he implied that his submission would not be available for editing.

His last minute announcement barely left us enough time to respond. However, in view of the contentious nature of the debate about governance, and his insistence that his comments be included in the Newsletter, we consulted the President and suggested that if we were to publish Prof. Guastello's commentary, we felt it our responsibility to publish, at the same time, commentary supportive of the CRC. When this was brought this to the attention of Prof. Guastello, he informed me that:

" Bob -- and this goes for one or two other people here present [i.e., on the EC - Ed]-- *please try to remember that I am a trustee of this organization. When a trustee of an organization requests 4 pages to explain some matters of legal, financial, and otherwise professional importance to the constituents, there is a narrow range of correct responses. What I see below* [i.e. our proposal to publish opposing views-Ed] *is not one of them. Our President will explain what happens next when she has a chance to do so. -Steve "*

[Note: The EC, Executive Committee, members were Guastello, Pincus, Arrow, Bird, and Koopmans. The current EC members are Guastello, Pincus, Arrow, and Koopmans. The Trustees are Guastello, Dooley, and Goldstein.]

When we objected to the characterization of our editorial policy of fairness as not a "correct response" we asked for clarification from the President. She subsequently informed me that Prof. Guastello had taken his demand to the EC and that the EC had passed the following motion proposed by Prof. Guastello:

MOTION: That Stephen Guastello will be allowed to publish a learned counterpoint to the proposed changes to the AO in the same issue of the Newsletter as proposed changes to the AO. This piece of writing will require 4 pages in Newsletter format. Copies of the final document will be distributed to all members of the EC at the time it is ready for the Newsletter copy deadline (July 15, 2005).
Rationale: The administration of the Society's business meeting falls squarely in the purview of the EC, and overrides any purview of the Newsletter Editor that could be different from the requirements of the EC. The publication of the critique will meet the Society's responsibility to publish a suitable counterpoint and record it in the archives of the Society. Please bear in mind that the informal discussions of the past few days indicate that I have the support of the Trustees to prepare this piece of writing.

We, again wrote the EC, resisting publishing the commentary alone on the basis that (1) that the publication of one persons evaluation of the CRC report, without appropriate response was unfair to members and against our editorial policy; (2) that the commentary was as yet unseen and was not edited by us, (3) that alternative ways of communicating were available to the EC (handbills and letters to the membership, for example), and (4) that the EC was usurping the traditional responsibilities of the editor. I requested that the EC reconsider its position and rescind its demand. They did not respond. Prof. Guastello never submitted his commentary and it was not published in the Newsletter.

Following the Summer Conference, President Koopmans informed me as follows:

Hi Bob, With the dust around the Denver conference settled, the EC returned to the motion that the EC rescinds its action of July 17, 2005, which mandated that the NL editor publish a 4-page commentary by Stephen Guastello, exempting it from the standard NL editorial review process. The majority of EC members voted against this motion. Thought you should be the first one to know...
Matthijs

In a lengthy email we requested that the EC reconsider their decision, citing references, traditions, and precedents for Editorial freedom in such circumstances. They declined to reconsider.

There are several points we wish our readers to keep in mind: (1) We did NOT refuse to "allow" Prof. Guastello's commentary or any commentary in the Newsletter. What we DID argue was that to publish one side without the other was a violation of our editorial policy. (2) We were NOT asked to provide our input to the EC before they made their decision to attempt to force us to publish Prof. Guastello's commentary without soliciting a rebuttal, nor was the matter brought before the Publication Committee. (3) The tenor and intent of the communications to us by Prof. Guastello and the EC was that the political power of the EC, the Board of Trustees, and the

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individual powers of Prof. Guastello could be used to force us to forgo our editorial responsibilities; the political force of this assertion is multiplied by the fact that we were *never consulted* by Prof. Guastello nor by either of the these official bodies regarding our objections or intents. (4) Although the commentary was never presented by Prof. Guastello, and was never published, it is none-the-less the case that the EC passed a motion to direct the Editor to publish something sight unseen, without editing it, and without subjecting it to editorial review.

We cannot, in good conscience, let pass such a blatant attempt to direct the editorial process to meet the political objectives of one powerful side of a conflict. To do so would be to place the content of the newsletter under the whim of powerful people in the Society as well as lead the readership to distrust Newsletter content.

I hereby request the President to formally bring this matter of editorial freedom of the Newsletter editor before the full membership of the Society. Pending this, I will maintain my position that the content of the Newsletter shall not be determined by political pressure or prior restraint, but by traditional editorial procedures and policies.

Robert J. Porter, Ph.D.
Newsletter Editor, October, 2005

A reply will appear in the next issue of the Newsletter -- MK

A New Perspective on Complexity and Education

a brief review by Matthijs Koopmans

In the area of education, chaos and complexity theory have not had the same degree of impact as in psychology, biology or economics. For that reason, William Doll, Jayne Fleener and John St.Julien's new book *Chaos, Complexity, Curriculum, and Culture: A Conversation* (Peter Lang) is a particularly timely contribution to the field. The book takes a broad perspective on the historical origins of teaching and learning, and explores the ways in which complexity theory enriches our thinking in this area. Fleener, one of the book editors, notes:

"Challenging the use of "New Science," [this book] explores the epistemological and ontological bases for approaches to understanding our world from chaos and complexity perspectives. Building on Vico's eighteenth century critique of Newton, the notion of poetic logic is introduced as a way to make sense of the sciences of chaos and complexity as postmodern approaches to science and education, as truly alternative "methods" for an unfolding, dynamic, self-reflexive curriculum, which may allow for truly emergent and creatively adaptive learning. Contributions for chapters came from education scholars from the US, Britain, Canada, China, Denmark and India."

Talking about her own research, Dr. Fleener notes: *"My current research continues to explore how, though our language and relationships of inquiry and community we may change our understandings about education. As our language and understandings adopt the metaphors and meanings of chaos and complexity, we may come to see teaching, learning,* *and the curriculum as more dynamic, open, and creative. For me, living in South Louisiana, re-thinking and re-imagining schools and education have become even more important as we rebuild our post-Katrina world."*

Readers with interests in the application of "The New Science" in education may find this book a useful addition to their bookshelf.

MEMBER NEWS

Crawdad Text Analysis System 1.2 Available

Kevin Dooley writes to announce Crawdad Text Analysis System 1.2, a Windows application that helps researchers and analysts gain insight from unstructured text, is now available.

Crawdad 1.2 provides a number of analytical modules which allow the researcher to browse and visualize individual texts, compare two texts, automatically sort a population of texts into clusters, perform a full-text search, and develop themes via factor analysis. Additionally, users can export word influence values and perform statistical analyses such as regression, ANOVA, and time series analysis in their favorite statistical package. Word influence values can also be used to score a pre-existing coding scheme. Users can also specify a custom dictionary to tokenize entity and person names.

Crawdad 1.2 embeds Centering Resonance Analysis, or CRA (Corman et al., Human Communication Research 28(2), 2002). CRA is based on linguistic theory concerning how people create coherence in their communication, and uses natural language processing to create a network model of text. These CRA Networks have been shown to accurately represent the concept map that emerges when a person reads the text. Word influence values are then calculated based on the structural position of each word within the CRA Network. Purchase cost: Academics and non-profits ($495 per license), commercial ($1995 per license), with twenty percent annual maintenance fee after first year.

A New Journal for the Chaos and Complexity Community

Professor Franco F. Orsucci, Editor in Chief, orsucci@ucl.ac.uk), announces the first issue of **Chaos & Complexity Letters (International Journal for Dynamical Systems Research.** Prof Orsucci writes:

"Our journal has finally reached its printed status. The ISSN for CCL is 1556-3995 and we will now start to propose it to the major indexes. We are finally pretty satisfied by the scientific and graphical quality of the final result. It is even more interesting to let you know that we have at least 4 other issues ready for print and there is a Special Issue prepared by the Institutes of Physics and Linguistics of the University of Potsdam in its final editorial phase.
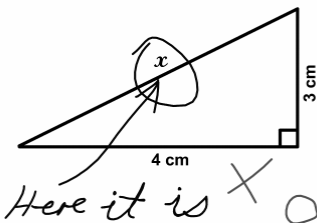
One of my friends in the Ed Board was suggesting to "enjoy the process" as this is just a first step in our joint enterprise. I hope to receive from you many feedbacks about contents, editorial issues and proposals of special issues and papers. The publisher has also proposed to start a series

inspired by our journal and this could be another occasion for interesting collaborations. In the meanwhile **Nicoletta Sala** and myself express our gratitude to all the authors and the board for sharing this interesting experience. Contents of the first issue are summaried below:

Editorial, **Franco Orsucci**; Memories: **Ilya Prigogine** and his last works, **Gonzalo Ordonez**; Original papers : Acceleration and entropy: a macroscopic analogue of the twin paradox,Ilya Prigogine and Gonzalo Ordonez; **William James** on Consciousness, Revisited, **Walter J. Freeman**; The Structural Equations Technique for Testing Hypotheses in Nonlinear Dynamics: Catastrophes, Chaos, and Related Dynamics, **Stephen J. Guastello**; Synchronization of Oscillators in Complex Networks, **Louis M. Peco**ra and **Mauricio Barahona**; CTML: a mark up language for holographic representation of document based knowledge, **Graziella Tonfon**i; News and Ideas: Sustainability and bifurcations of positive attractors, **Sergio Rinaldi** and **Renato Casagrande.**

Subscriptions for individuals is $45, institutions $175. Further details on contents and instructions for authors can be accessed on: www.novapublishers.com

3. Find x.

Ocular Trauma - by Wade Clarke ©2005

SCTPLS members might be interested in a new paper concerned with mathematical reasoning and training of psychologists. -- Editor

Quantitative Training in Psychology is Deteriorating: Traditional Methodologists, Mathematical Psychologists, and Psychology Face a Challenge by James T. Townsend, President Emeritus, Society for Mathematical Psychology, Richard Golden, Secretary Treasurer, Society for Mathematical Psychology Thomas Wallsten, Editor Emeritus, Journal of Mathematical Psychology http://www.apa.org/science/psa/monitor.html

Number Theory Essay to be Published

Miguel Angel Martínez Iradier writes to tell us that an essay on time, biology, physics and number theory, that it is going to be published by Motilal Banarsidass of Delhi soon. The main subject of the book is a special kind of experimental */duality/* that we can detect in the time series of the sanguineous pulse, and that, being not irreducible, we can extend probably to many other systems. We even speculate about the Riemann zeta function, its possibilities of spectral resolution and some of its temporal features, and also we aim to computational number theory. But this duality is particularly linked with the temporal series of the EEG and the problem of the cognitive dominion of the two cerebral hemispheres. The duality is very easy to check, but more difficult to treat mathematically. I am sending the text worldwide, and there are already some groups in Russia, Germany, India, China and maybe in other parts studying this kind of duality and its far-reaching potential relations. I invite you to explore the mathematical implications of this duality,

and its applications also. I hope that you will be able to manage the experimental protocols needed for this kind of approach, which are not too complicated.

Health and Social Care Modeling Site Announced

Peter Jones writes to draw our attention to a new website which includes links to chaos and related material especially visualization in the social sciences. Hodges' Health Career - Care Domains - Model [h2cm] http://www.p-jones.demon.co.uk/ - can help map health, social care and other issues, problems AND solutions. The model takes a situated and multi-contextual view across four knowledge domains: Interpersonal, Sociological, Empirical, Political.

Our links pages cover each care (knowledge) domain e.g. Sciences: http:// www.p-jones.demon.co.uk/linksTwo.htm Thank you for your time and consideration. Peter Jones, Clinical Specialist: NHS Care Records Service Project / Informatics; Lancashire Care NHS Trust; Greenbank Preston; Lancashire; http://www.p-jones.demon.co.uk/

Snowflake Winter Chaos-Conference 2005 Theme Announced
by Fred Abraham, Conference Coordinator

Fred Abraham writes to invite SCTPLS members to this year's Snowflake Chaos conference the University of Pittsburgh, first weekend in February 2-5, 2006, (Thursday eve through Sunday noon). The conference, arranged by the Blueberry Brain Institute, is the 13th Annual Snowflake Conference. Fred writes that this year's theme is: Dynamical Systems Thinking in Science and Society. *(When asked to explain the purpose and history of this conference, Fred contributed the following. – Ed)*

This conference has established a tradition of informality both in style and substance. It is open to metaphoric as well as formal explorations of systems/holistic thinking to science, society, and philosophy, not necessarily in that disorder. It is a small conference and features open discussion. It started as an attempt to model regional meetings for the Society, but has ended up as an independent conference with a large overlap with the Society.

The first year was held in the Northeast Kingdom, a remote area near the Canadian border, and was notable for the establishment of the open discussion format that was also the hallmark of the Oriilia (lake in Canada) Conference the same year of the Society. It was also notable for its crisp weather, having temperatures that reached -39 F, which put a chill on the attempt to get people out on cross country skis. To give an idea of the range of topics that we have had, we have several people in in the field of education at all levels. Last year Karen VanderVen discussed development ideas of Erik Erikson, Charles Nelson applied Holland ideas to modelling classroom learning, and Carlos Torre revisited his triadic theory discussing the ecology of education. Jenifer Drury discussed Class Consciousness: Building Community in the High School Classroom to foster student achievement and creating an environment for dialogue and increased collective intelligence. Martin Gardiner has for a few years, updated us on his work

showing the effect of early music education on both academic achievement and socialization.

Matthijs in past years has presented extension of the ideas of Bateson. One year we focused on terrorism, Frank Mosca gave in his usually energetic and witty fashion, some history of terrorism in the early 20th century in Russia. Jeff Goldstein has gotten us into his project of deconstructing the concept of emergence. Two years ago his home provided one of the loveliest venues we have ever had. Once it was also in a home, mine in Vermont. Living rooms make for congenial and animated discussion. Last year Irina and Bill Sulis in one of the more technical presentations, discussed connection graphs and combinatorial analysis, whose relevance is most apparent in its affinity to agent based modelling. Robin Robertson discussed the evolution of consciousness. Two years ago, Bob Porter discussed fundamental failures of the old scientific paradigm and three important but infrequently addressed aspects of the new nonlinear one, and last year continued the discussion of the philosophy and practice of science.

Bob Eldridge discussed Financial Analysis. George Muhs discussed nonlinear drivers of the creative process using special effects in the motion picture industry from his own experience to illustrate. Our own answer to Robin Williams, Mark Filippi, discussed hidden dimensions of well-being with penetrating insight into the relevance of nonlinear thinking to life, with his highly imaginative and broadly disciplined modeling. Jerry Chandler, head of Washington Evolutionary Systems Society, presented his work on symbol systems, which was very radical with respect to logical relations among the sciences. Ivy Lazzarini opined that Neuro-occupation is a conflate of philosophy, neuroscience and occupation; it is also the quest for understanding how humans through the meaningful occupations form the patterns of brain activity that lead to the habits and rituals of a life time. Linda Dennard came all the way from the University of Cork (Ireland) to present her ideas about music and non-symbolic space: The discomfort of the Public, which suggested that music, is more than a product for consumption, technical analysis, or ideological cheerleading, but rather an attractor basin for diversity.

In the past two years, Tobi Zausner has discussed the dynamics of the creation in art, and the role of stress in self-actualization. This year, a local but world class dynamicist Bard Ementrout participating, as well as Karen, Matthijs Koopmans, Tom Malloy, Tobi Zausner, Bob Porter, Ivelisse Lazzarini, Charles Nelson, Jerry Chandler, Linda Dennard, and myself.

What started as a small regional conference meeting in Vermont, Massachusetts, and Connecticut, USA, has become broader with participants coming from Florida, California, Utah, Canada, England (Dick Bird several times a participant), and Ireland, and has had several past presidents of the Society as participants, is now moving out, to Pittsburgh this year (Karen VanderVen, this year's facilities chair at the University of Pittsburgh), and next year Carlos will be Facilities chair for our conference in Puerto Rico. We already have many participants for this year, but welcome further participation. Send your intention to participate, and probable topic or abstract to Fred Abraham at abraham@sovernet. And

to learn more about the conference, go to our home page at www.blueberry-brain.org, and select Winter Conference from the index page.

Upcoming in Oz
Perron-Frobenius at the Edge of Chaos
Robert A. M. Gregson
Australian National University

We convinced Prof. Gregson to share this abstract is from an upcoming paper prepared for the 12th Australasian Mathematical Psychology Conference,University of Adelaide, December 2005. Interested readers should contact the author directly for more information. -- Editor

Abstract: From the approach of symbolic dynamics, any psychophysiological time series may be given a square non-negative matrix representation, that is then treated as the generator of a Markov chain. This has eigenvalues that, if the matrix is scrambled. that is it is effectively not degenerate, give a picture of the complexity of the dynamics. That picture is computed for two time series, one theoretical and homogeneous, resembling a Shilnikov attractor, and the other from real physiological data that are very unstable with transient outliers. A comparison is made with indices of entropy and chaos for each of 10 data sub-blocks. No index in itself provides a satisfactory representation of the total dynamics, but the differences between the indices are intrinsically informative. Assumptions of linearity are universally invalidated. The use of the entropic analog of the Schwarzian derivative (ESf) leads naturally into the calculation of Kullback-Leibler information measures as asymmetric proximity indices between subseries of the data. The full matrix of these indices has eigenvalues that are informative concerning the non-stationarity of the process. ”Until the present, most of our understanding of biological systems has been delimited by phenomenological descriptions guided by statistical results. Linear models wih little consideration of underlying specifics have tended to inform such processes. What is more frustrating has been the failure of such models to explain transitional, and apparently aperiodic changes of observed records (Zbilut, 2004, p.4).

LETTERS TO THE EDITOR
Letters to the Editor are always welcome. This month we have two. --Editor
Founding Member Writes About Governance Concerns
Long-time Member Questions Journal Charge

Dear Editor,

A new Reform Forum-Caucus has been created to air issues of concern and develop strategies related to changes in the governance of the Society. Its basic concerns are with constitutional reform (changes to the Articles of Organization), governance matters, and other changes for which we would like to lobby. A synopsis of our concerns follows:

We are concerned with basically two related issues. The first is that the Articles of Organization, while adequate in many respects, is considerably flawed and needs serious

change. These deal with the fact that some of the officers (who are also on the Executive Committee) are not elected nor are their terms spelled out. The same is true of the Trustees. These two bodies are the main governance councils of the Society. There are other matters of democratization, of giving the members more points of control that are lacking in the original Articles of Organization. To review these matters, see the report of the now expired Constitutional Review Committee (blueberry-brain.org/SCTPLS/SCTPLS CRC reports.htm), which while you may not agree with all the amendments it proposed, will give you a good idea of what these problems are. Presenting these changes was hampered by obstruction of many steps of the committee's presentation of these issues to the membership (improper mailing of the proposals, inability to use the Society's email list to discuss the amendments one-by-one, and inadequate scheduling of their discussion at the annual business meeting in Denver).

The second basic issue relates to governance practices by the Executive Committee and the Trustees. The problems the Constitutional Reform Committee encountered with some members of the Executive Committee led to our discovery that many other individuals, including past presidents of the Society and members of other committees, were having difficulties with members of the Executive Committee who were overzealous in their control efforts. There was a time when few wanted to be involved in the governance of the Society as either officers or as members of various committees, but under the Holly's presidency, many more new members became involved, ready to take positions of responsibility, only to run into these type of obstacles. One example of obstruction included changing a Presidential report in the Society's Newsletter after it left the Editor's desk. It pains me to reveal that, despite the wonderful people who come to our conferences, and the imagination, energy, and friendship they exhibit, behind the scenes these governance problems are occurring. If others are concerned, we will be exploring a variety of strategies to either resolve these problems, or, if necessary, even letting the rift go to the creation of an alternative organization.

Those wishing to participate in this new Forum may submit commentary to me (abraham@sover.net). Those wishing to follow the comments and progress with reform efforts can consult this Forum (blueberry-brain.org/SCTPLS/Society Reform School.htm). This Forum is not an official activity of the SCTPLS, and is not obviated by the appointment of a new committee to examine the Articles of Organization, a committee which is comprised of one person who is opposed to any change in the Articles, and others who are friends of the authors of the original Articles. It is further necessitated by the fear of censorship of our concerns and comments by the present governance of the Society. It seems paradoxical that a society whose subject is largely about change, and which has many experts in organizational development, is so rigidly opposed to self-reorganization.

Frederick David Abraham, Co-Founder and Second President, SCTPLS
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Dear Editor:

Having had some brief experiences working within the committee structure this past year, I'm more aware of the inequities and incongruities that exist between the membership, the greater NDS world, and the SCTPLS leadership, vis-a-vis, the Executive Committee. Here's an example. I am struck by this one line in the renewal forms as it appears on the SCTPLS website...

$55 per membership year is allocated toward the subscription to NDPLS.

That's a huge percentage of my annual contribution to the Society! Not knowing the production costs and other monetary aspects of the NDPLS journal, I'm not quibbling about the $55 amount.

My issue is how implicit membership renewal is in 'funding' it's publication. I wonder if every year I was told that my $75 entitled me to two NDS books on the SCTPLS bookshelf, a choice of five NDPLS articles from the prior year and the obligatory annual poster, I'd actually look *forward* the renewal letter to see what's in the package this time? Maybe I'd get bounced to an NDS product page and have the option of purchasing $55 worth of software, CD's, e-books, and other *member-generated* material/services. Why is my renewal so bound to just NDPLS? Since we have such a prolific membership, wouldn't it serve our interests to market our 'wares' to 'our own' first, and let those that truly desire to fully fund the NDPLS personally chose to do that? Is it time to ask this? I'm all for what the NDPLS has achieved, although my work and it's focus often don't cross paths. My concern is that we are bypassing an opportunity to broaden our base for the NDPLS' benefit. I requesting we explore the option of letting members reallocate their $55 to benefit our members.
With Turbulence,

Mark R. Filippi, DC
www.markfilippi.com
SCTPLS member since 1997

REPORT FROM THE CUSP

Prof. Gregson recently wrote to share a draft of a more extended work on the application of nonlinear science to the interaction of groups in a social-political context. He agreed to the publication of this fragment in the Newsletter. A longer version is promised for the Journal or other similar venue. -- Editor.

Irregular Dynamics of Self-Regulation:
Accountability where the Dialectic is Compromised

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"Whatever policies are eventually decided by Governments, it seems to us that people whose lives are affected by them should be able to ask about the strength of the scientific evidence on which they are based."

(Copas & Eguchi, 2005, p 511)

I want to consider some properties of systems where there are three or more interacting entities with feedback between them pairwise and in n-tuples. The dynamics are not analytic and would need to be simulated numerically, as is today often done. The questions arise when considering the powers and accountability of what I am going to call QABs, [quasi autonomous bodies] that exist together with the State (S) and the community (C). 'State' I will take to mean the government and what it controls through legal and economic powers, and the community everyone that is not part of the other two. This control can be ideological as well as by direct force or control of accessible sustenance (Abercrombie & Turner, 1976).

We can have QABs that are pseudo-QABs when they are purely instruments of the State, like trade unions in a totalitarian state. A QAB can morph into the State, as when the Nazi party became the de facto German government in the 1930s. Two or more QABs can compete, and the flow of power over the members of a QAB can float between the QAB, other QABs, and the State. A QAB can become invisible to C and S if its inputs are covert and it has no outputs. A sleeper cell of spies might be such as example.

Individuals can move between QABs and S or C, and the matrix of probabilities of transition probabilities between C and a set of QABs, the occupancy matrix Moc, can be found empirically over an interval of time, though it is not stationary, due to interventions from S, so the process is not Markov. We will comment on the relation between Moc and accountability later.

The State can intervene in favour of one or more QABs and to the detriment of the authority of others. This description is not about morality, just about degrees of control, though the control can be an attempt at moral control and censorship. In fact censorship boards, such as those that control cinema, are often run as QABs, and are financially dependent on the State for their continued existence and authority. I am of course aware that political and economic theories and a diversity of mathematical models have been constructed to deal with this social topic (Findler & Malyankar, 1993; Skyrms and Pemantle, 2000; Dercole, 2005); some may be seen to derive from pioneers such as Marx or Weber.

An example of a QAB would be the Cricket Board in the English-speaking world. That body decides what international matches are played, and can impose fines on players for conduct such as abusing an umpire with intemperate language. In old-fashioned terms, they are there 'for the good of the game.' The Board can meet in council, elected or appointed, and may change the rules of the game.

The State does not have rules of cricket in its statutes, but may in response to community pressure, request changes (it has, though, intervened to make Cricket use Metric instead of Imperial definitions for pitch length). The same holds to some extent for a Boxing Board of Control. However, there are some forms of conduct that a QAB is not thought to be allowed to sanction in its members, acts of violence in a game, such as hitting the umpire on the head with a cricket bat, could make the player liable to prosecution for assault under statutes that transcend the rules of the relevant QAB. Statutes of such generality would apply comparably over a range of QABs, in my example for baseball and for AFL matches. Tennis is potentially a less violent sport, but players are fined on the spot for rule violations. The rules of tennis are not in the statute books now, they may have been for court tennis in the time of Henry VIII. Welsh law used to contain rules for defining a good household cat!

Let us consider another sort of QAB in a different area, company administration, that is more interwoven with statute law. Here a person who is a company director has to satisfy rules, such as not being an undischarged bankrupt, or having a criminal record, or being insane. Companies now have to conform to disclosure on Corporate Governance, the actual form of this varies between countries. A QAB can have rules concerning its subject persons, or the State can intervene on membership rules, and on rules for elections, such as the Howard (Australian Federal) government seeks to do with trade unions. A State can use a QAB as effectively a quango to extend the control of the State to the community

Now let us turn to questions that appear to have ethical implications. The State may favour some QAB's authority by advancing the doctrine of 'self-regulation', as opposed to regulation by specific legislation. This may be justified by 'not interfering with market forces, or by 'freedom of belief or the practice of a faith', but can cut both ways. Recent urges by the State to constrain the forms of Muslim belief that are taught in Mosques or schools seems to be an example In the Netherlands it has been made a requirement that some preaching in Mosques shall be in Dutch. Arguments about individual civil liberties can touch on the powers of QABs as well as on S.

When we come to medical work, one Australian QAB is the NHMRC. It will be helpful to distinguish this QAB from the GMC in Britain; the GMC does concern itself with unethical behaviour. The GMC concerns itself with unprofessional conduct by medical practitioners, whereas recently the NHMRC has set itself up (apparently with the approval of S) as a QAB1 to control research both within and outside (QAB2) the health sciences. Within my attempted framework for analyzing power relationships between S, C and QABs, I want to look at the ethical obligations of individuals who have legitimate claim to be members of a QAB. For example, I have on my study wall a framed certificate that says I am on the Register of Chartered Psychologists (in the UK), I am number 3259 on the Register, and I have agreed to abide by the Code of Conduct. How do I interpret that, which was issued when I did some work in hospitals and other places? It certainly would imply that I should describe human behaviour as accurately and fully as I can, using the skills I have acquired to make me eligible to become a C.Psychol., and that I should at the same time always respect another person's wish for privacy. I would argue that my Chartered ethical obligations should override anything invented by the NHMRC (a QAB1) as an external and inadequately-informed body, but not necessarily *when in Australia* codes devised by the Australian Psychological Society (a QAB2). I have also been a witness before a Royal Commission dealing with the intrinsic conflicts between Freedom of Information and Privacy Rights that bedevil law drafting. Various scholarly QABs have drafted rules for conduct that arise in their specialized work, about which they

will often be the only persons with first-hand knowledge of critical situations. Anthropologists working in the field in a faraway foreign country are still expected (by their own QAB and by C in that place) to behave responsibly. One particularly interesting recent case before the UK's GMC was that of Professor Meadow, who was struck off for claiming persistently competence in statistics which he did not have, as that claim led to legal injustices. The evidence of a very senior statistician, was decisive. The Royal Statistical Society is a QAB in the UK.

Suppose S creates a QAB1 to exercise limited powers, with rights of self-regulation, and instructs this QAB1 to extend its powers to another QAB2, when QAB2 already has its own rules of conduct. And further suppose, very realistically, that both QABs 1 and 2 do have small proportions $\pi1$ and $\pi2$ of members whose behaviour violates ethical (and perhaps legal or criminal) criteria set by C and built into legal sanctions created by S when S is accountable to C and supposedly QABs are also accountable to S and to C. But QAB1 demands self-regulation but denies it to QAB2. S can for reason of ideology (religious or political) allow variations, in the form and extent of self-regulation, between QABs. S can rely on social traditions (not necessarily unanimously held) obtaining within C to assert that some QABs are special custodians of ethical values, and hence have some degree of self-regulation denied to other QABs. The following is an example "(17-9-2005): A study for US bishops by the John Jay College of Criminal Justice found that of 10,667 people who alleged they had been [sexually] abused by a priest between 1950 and 2002, 81 percent were male. The Vatican has selected 117 visitors to conduct inquiries."

These rights of self-regulation can be fiercely and even distastefully defended by QABs. Now the relative magnitudes of $\pi1$ and $\pi2$ come into play. These parameters are risk measures, for which it might be possible to obtain estimates. False claims about $\pi1$ and $\pi2$ are, in the light of the UK's GMC case, intrinsically unethical behaviour, particularly if asserted by members of QAB1 delegated to sit on the committees of a QAB2. False can include false positives and false negatives. A risk has two parameters, its conditional probability of occurrence under specified contexts and its outcome. The severity or unacceptability of a risk is under Bayesian inference or decision theory the product of probability and outcome.

In reality what we are calling QAB2 is an abstraction, there will exist a number of clones of a prototype QAB All the incorporated societies in Australia have to provide annual returns to the Registrar of their audited accounts, but their definition of their activities, such as promoting interest in classical music, can be unique.

Let us define the set of all clones of a type as

$$Ex(\alpha,y): Clones(x)\ \alpha \Leftrightarrow \alpha_x(x,y) \Leftrightarrow Clones(x)\ \alpha$$

where Ex means the set of QABs exchangeable in terms of accountability to y. We will return to exchangeability later in the argument. The set $Ex(\alpha,y)$ may correspond in some models to the Marxist idea of a social class, but that resemblance is not necessary to the present argument.

There is an important complication and difference here from theories of social class; $Ex(\alpha,y)$ may be part of a social class, or may in fact cut across class boundaries; where classes exist they are at a higher level of abstraction and

generalization than sets of QABs. Further, individuals may participate in more than one QAB at the same time, so a matrix of mutual participation of individuals in different QABs is not the same as the matrix of accountability, though that too will be connected to participation.. Precisely how they are connected in turn depends on the total social structure of C. It would follow, in constructing a multi-agent model of QABs, that three levels of organisation, class, accountability and participation, would have to exist simultaneously.

In the case of NHMRC ethics committees in Australia, a form of QAB1, it has been required that ethics committees reviewing non-medical research proposals (a QAB2) shall include members of law and religion (two other QABs thought by S or by QAB1 to have special status in ethics) which are self-regulating. This is done with the assumption that QAB2s do have non-zero $\pi2$ values, and hence generate risks that have to be minimised, but that $\pi1$ values are negligible by virtue of self-regulation rights within privileged QABs.

Both these assumptions in the case of NMHRC attempted regulations (in a so-called 'national statement') are empirically false (compare Paul, 2005, for a wider treatment). There exist a few members (low but not zero π) of law who evade income tax, there exist members of religious bodies who commit grave sexual offences, which C does not readily tolerate. The situation in the USA around 2002 concerning the Catholic dioceses and damages costs imposed against the dioceses is an example. The over-riding values of C, built into law, seem to imply that ethical probity is a property of an individual, not necessarily and sufficiently of membership of a QAB, however much self-regulation that QAB1 may claim. Interestingly, some forms of very bad behaviour as seen by C, such as murder or incest, do not have statutes of temporal limitation imposed on their prosecution. It is not sufficient that an individual is now a member of a QAB claiming ethical self-regulation, the offence may precede that membership.

So persons nominated by QAB1 to sit in some measures of control over a QAB2 have to be individually monitored, and the consequences of that monitoring duly noted. A QAB1 may by statute of S embed one or more members of a QAB1 within a QAB2, so that the accountability is linked by those persons who have no accountabilty to QAB2. This parallels the example previously given for company directors in Commercial law. It seems to be of second-order importance how the individuals on ethical committees are selected, but it does matter how subsequently they behave, and by extension how they have behaved in the past. It seems that S can and does intervene to make such criteria more or less stringent in particular cases.

I am moving here slowly towards the partially-defined structure of a mathematical simulation model in the style of Multi-agent systems, that might give us some insights into the intrinsic stabilities or instabilities of this curious situation. That means the introduction of notions of chaotic

dynamics and multi-agent networks augments previous analyses that were simply made discursively in terms of class structures. It may be insoluble precisely because it is a parallel (replacing gravity with accountability as the variable linking bodies) to the three or n-body problem in physics, and if it is then we can say with some certainty that it is is potentially chaotic, and will certainly oscillate under some parameter settings. Various writers have noted that the logic of some multi-agent-based models has outcomes that are paradoxical or inconsistent with simpler stochastic processes.

We need more variables if we are to model what is sometimes treated as a case of 'agent-based' modelling; each QAB is an agent (Wooldridge, 2002).

Consider η = the probability that a QAB will resist inputs that diminish its self-regulatory powers.

This η will increase, if C is effective, as a function of $(1 - \pi)$. That is, the fewer incidents of well-behaved behaviour of the members of the QAB, the more society C will want to intervene, and be resisted, with or without the formal compliance of S. If the QAB is one favoured by S, then S will facilitate increases in η by 'moving the goalposts'. It can do this by making QAB = QAB1 less accountable and putting QAB1 in charge of QAB2 if $\pi2$ is seen by some part of C (with which S tends to identify as being the greater part) as not negligible. Obviously S can weaken $\eta2$ by misrepresenting and exaggerating $\pi2$ and feeding that back to QAB1. New rules to protect society from possible terrorists can be helped along that way.

Let us now add another variable, that is a relationship between any two of S, C, QAB1, QAB2. Use α to signify accountability, and let any two agents be x,y. Then with $0 < \alpha < 1$ by definition

$\alpha_x(x,y)$ = the accountability of x from x to y, where y is the dominant agent.

If the 4×4 matrix of such $\alpha_x(x,y)$ terms is now set up over the set {S,C,QAB1,QAB2}, then because in general $\alpha_x(x,y) \neq \alpha_x(y,x)$, and as an hierarchical ordering of x, y, implies asymmetry of accountability, the matrix is not skew symmetric, and so there will almost always be one or more complex conjugate eigenvalues. This implies that the whole process will oscillate over time, unless it goes chaotic or implodes.

We now need to look at what happens if one $\alpha_x(x,x)$ = 1; that means the self-accountability is complete so the x is responsible to no one but itself.

An authoritarian agent declares itself accountable only to God, or the Party or the Market or whatever. $\forall y$

$\alpha_x(x,x) = 1 \Rightarrow \alpha_x(x,y) = 0$.

For an accountability matrix Mα to be viable and stable each $\alpha_x(x,y)$ must lie within limits, $0 \ll \lambda \ll 1$, that is every agent should have some accountability to every other agent, though there will be weak hierarchies of accountability. Otherwise some agent becomes pairwise autonomous, and there will be conflicts of interest. Over time all exchangeable QAB will be sucked into that autonomous QAB.

Now we have two matrices, Moc and Mα, and the problem of defining accountability in some measure or index, to reflect the idea of degrees of accountability, not yes/no accountability

Introduce the probability p(x,S) that QABx may be allowed by S to handle some inputs; those inputs H are people or information or information about people, call this w(in). This p(x,S) is related to η an to emerging evidence of π. That agents are linked by communication paths is intrinsic to some models that have been created, and reviewed by Wooldridge (2002). A QAB is often only obliged to output some condensed symbolic account of its real-world activities, such as balance sheets or score cards, or mission statements. If its accountability is challenged by S or C, then it may have to produce a different and more literal account of its activities.

Then define

$\alpha_x(x,S) = w(in).H(C,x) + (1 - w(in))H(x,C)$,   Eqn[1]

which reads 'the accountability of x to S is the linear sum of p(x,S) times the input information from C to x and (1-p(x,S)) times the output information from x to C'. As the H(x,C) or H(C,x) are elements of Moc this equation establishes the link between Moc and Mα. Strictly p(x,S) varies over time, as a consequence of feedback loops involving C,S, QAB, so a time suffix on terms in Eqn[1] would be needed to explore the evolution of Mα .If w(in)=0 then the State has killed off QABx, it has no inputs and has lost all its members back into an impotent society C. The autonomy part of the QAB has vanished.

Returning to Ex(α,y), we have modelling problems, in that the set is not a proper set (R. D. Luce once commented that the problem in mathematical psychology was that the sets are not bounded, they have indeterminate cardinality and fuzzy edges), but the exchangeability means that instead of having one idealised QAB with variable η,π over time, we can exploit the duality and have fixed η,π in each clone, and estimate the probability distribution of each of η and π over Ex. We need not consider random selection from Ex, the exchangeable condition is sufficient (De Finetti, 1937). From analogies in accident susceptibility theory, I suggest that a negative binomial distribution for each parameter might be suitable (Kendall and Stuart, 1969, section 5.14). The distribution of π is over a sequence of actions (later defined as D), not over persons within a QAB clone.

The condition on λ can be seen in graph theory terms, Mα is an unsigned (i.e. bi-directional) fully-connected graph, and all cycles of order 2 up to N, where N is the cardinality of Mα, exist. This is interesting because now we have two reasons to suspect the occurrence of chaos over time, the order three {S,C,QAB}, and the multiplicity of cycles which arise as we pass through a sequence of bifurcations (actually a Feigenbaum diagram, for a simple treatment see Gleick, 1987), but we need a much more detailed analysis of the internal feedback of a QAB in terms of its fluctuating α,η coupling over time adequately to support this speculative argument.

Note that these $0 < \alpha = \lambda < 1$ do not behave like transition probabilities, their matrix row sums do not add to unity, so the process is not a Markov chain (Gregson, 2005).. In fact, the η are in time, but the α need not be.

If an agent has a number of modes, each with different α, η and λ , then it should be replaced in the matrix by a set of QABs, and the transition probabilities between each version QABa,…QABn (or m) specified or postulated. The M={S, C, QAB1, QAB2} matrix then becomes of order (that is, cardinality) not 4 but 2+n+m.

Social psychologists now may distinguish between such modes, and write of 'organic pluralism' (Haslam and Parkinson, 2005), and can suggest it has desirable qualities in terms of social stability and development.

But what does M actually process? In agent-based modeling the agents have cognition, they take in information and process it, in my accountability matrix $M\alpha$ the agents either defend or attack ways of processing information about hypothetical situations, in their jargon they 'make research proposals with attendant methodologies'.

Each data input D_t has to be given a sequence number, t, and is treated like a vector {p,d,o,t} where p = people, d = data, o = operations on data, and t = time at input. The modelling at this stage gets complicated, and bears some relation to AI and to neural network methods. We have to find representations of serial-parallel inputs from the D_t into the matrix $M\alpha$ of $\alpha_x(x,y)$, and then output to where the D emerges, and in what form, unmodified, modified or rejected. The operation on D(input→output) via a QAB with parameters α, η, π is a form of risk filtering; it will have false positive and false negative risk estimates, if the real risk is zero and we have false positive estimates, then we have pseudo-accountability from QAB2 to QAB1. If the risk is false negative then we have elevated η. The false risk estimates are part of a 2×2 matrix, from which we may drive efficiency indices. If the true risk is zero, the efficiency is zero, so the cost can go to infinity. The relevant literature gives some examples, to solve this sort of abstract problem, by simulation; but there is no general solution and probably cannot be; the relevant literature is a collection of special cases.

Something of a codicil needs to be added. I have ignored the internal cardinality of each QAB, call it κ, and in practice I suppose that $1 < \kappa <$ about 12 for large committees. The interesting question arises if $\kappa = 1$, that is, has a single individual the right to function as a QAB? In some definitions of a free society that is axiomatic, in others it creates martyrs.
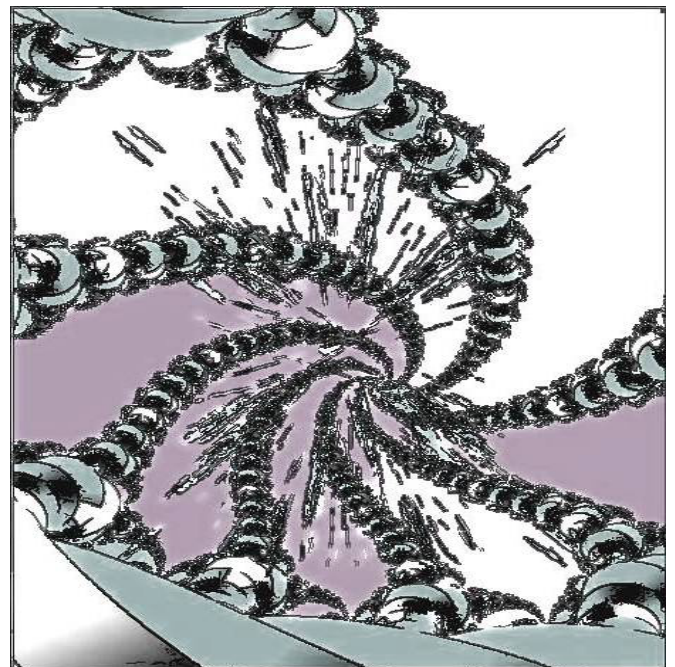
Notes

It is not asserted that the elements of $M\alpha$ should necessarily be in a metric space; rather it appears sufficient that they be weakly ordered.

What is being explored here is related to the studies of social laws (Shoham & Tennenholz, 1996), where it is shown that the problem of finding a social law is NP complete, and hence not soluble in reasonable time. Tractable cases seem not to correspond to real world situations. It is not know if the Moc $M\alpha$ approach used here is NP complete.

References

Abercrombie, N. & Turner, B. S. (1976) The Dominant Ideology Thesis. *British Journal of Sociology, 29*, 149-170.

Copas, J. & Eguchi, S. (2005) Local model uncertainty and incomplete-data bias. *Journal of the Royal Statistical Society, Series B (Statistical Methodology), 67*, 459-513.

De Finetti, B. (1937) La prévision: ses lois logiques, ses sources subjectives. *Annales de l'Institute Henri Poincaré, 7,* 1-68.

Dercole, F. (2005) Border collision bifurcations in the evolution of mutualistic interactions. *International Journal of Bifurcation and Chaos, 15,* 2179-2190.

Edmonds, B. & Möhring, M. (2005) Agent-based simulation modeling in social and organizational domains. *Simulation: Transactions of the Society for Modeling and Simulation International, 81,* 173-174.

Findler, N. & Malyankar, R. (1993) Alliances and social norms in societies of non-homogeneous, interacting agents. In *Simulating Societies –93: Pre-proceedings of the 1993 International Symposium on Approaches to Simulating Social Phenomena and Social Processes.* Certosa di Pontignano: Siena, Italy.

Gleick, J. (1987) *Chaos: Making a new science.* New York: Viking Penguin.

Gregson, R. A. M. (2005) Perron-Frobenius at the Edge of Chaos. [Conference paper]

Haslam, A. & Parkinson, B.(2005) Pulling together or pulling apart? *The Psychologist, 18,* 550-552.

Kendall, M.G. & Stuart, A. (1969) *The Advanced Theory of Statistics, vol I.* London: Griffin.

Paul, G. S. (2005) Cross-national correlations of quantifiable societal health with popular religiosity and secularism in the prosperous democracies. *Journal of Religion and Society, 7 (11),* electronic ISSN 1522-5658.

Shoham, Y. & Tennenholz, M. (1996) On social laws for artificial agent societies: offline design. In *Computational theories of Interaction and Agency.* (eds P. E. Agre and S.J. Rosenschein), pp 597-618. Cambridge, MA: MIT Press.

Skyrms, B. & Pemantle, R. (2000) A dynamic model of social network formation. *Proceedings of the National Academy of Sciences of the USA, 97,* 9340-9346.

Wooldridge, M. (2002) An Introduction to MultiAgent Systems. London: John Wiley.

2nd *International Nonlinear Science Conference*
Research & Application in Behavioral, Social & Life Sciences

Keynote Speakers Announced for INSC in Crete

The planning committee for the International Nonlinear Sciences Conference announces the keynote speakers for the 2006 Conference at the University of Crete Medical Center, Heraklion, Crete, Greece March 10-12. The keynotes will cover a variety of disciplines and topics.

Peter Allen, Professor and Head of the Complex Systems Management Centre at Cranfield University and one of the founders of the UK Complexity Society, is well known for his work in operations management and will be informing us of his specific topic soon. **Tassos Bountis**, Professor of Mathematics at the University of Patras, will be presenting *The New Science of Complexity: Promises and Challenges for the 21st Century*. **Stephen J. Guastello**, Professor of Psychology at Marquette University in Milwaukee, WI USA, will be presenting *Leadership Emergence in Coordination-Intensive, Creative Problem Solving, and Production Groups*. **Wolfgang Tschacher,** Professor and *H*ead of research of the Department of Clinical Psychology & Rehabilitative Psychiatry, University Psychiatric Services Bern, Switzerland, will be presenting *Self Organizing and Cognition*.

The Committee has added new information to the INSC website regarding conference venue, local information, hotels, and proposed cultural activities. Conference registration and hotel reservations are available on separate pages. Hotel accommodation arrangements can be viewed by downloading the conference 'hotel reservation form' under the hotel link on the INSC website.

Members are encouraged to visit the INSC website to register for the conference, submit abstracts, or download forms: www.societyforchaostheory.org/insc/2006. The deadline for abstract submission is November 15, 2005. Conferees can take advantage of special rates for early registration rate, which ends on January 20, 2006.

Ivelisse Lazzarini, Conference Chair
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Nonlinear Dynamical Bookshelf

Collected by Stephen Guastello, mostly from material that people sent to us.

Bertuglia, C., & Valo, F. (2005). *Nonlinearity, Chaos and Complexity: The dynamics of Natural and Social Systems.* **NY: Oxford Univ Press** 320 pp. ISBN 0-19-856791-X. The note I have says "including an extensive index and bibliography along with numerous examples and simplified models, this is an ideal course text'. It is claimed to be a unique text among many, covering both the physical and social sciences." -- RAMG

Callebaut, W., & Rasskin-Gutman, D. (Eds.). (2005). *Modularity: Understanding the development and evolution of natural complex systems.* **Cambridge, MA: Bradford Books.** 464pp. ISBN 0-262-03326-7. An edited book with contributions from artificial life, cognitive science, development and evolutionary biology, linguistics, mathematics, morphology, paleontology, physics, theoretical chemistry, philosophy and the arts. – RAMG

Chapman, R., & Sprott, J. C. (2005). *Images of a complex world.* **Singapore: World Scientific.** (Also Hackensack, NJ). ISBN 981-256-401-2. This coffee-table book will delight and inform general readers curious about ideas of chaos, fractals, and nonlinear complex systems. Developed out of ten years of interdisciplinary seminares in chaos and complex systems as UW-Madison, it features multiple ways of knowing: Robin Chapman's poems of everyday experience of change in a complex world, associated metaphorically with J. C. Sprotts's full-color computer art generated from billions of versions of only three simple equations for strange attractors, Julia sets, iterated function systems; his definitions of 39 key terms; a mathematical appendix; and even a multiple choice quiz to test understanding. Accompanied by a CD-ROM of the poet reading 13 poems and 1000 images of chaos art from which slide shows can be generated and 100 high-resolution posters created. With a foreward by Clifford A. Pickover. – *Publisher/back cover.* Now a *Scientific American* book club selection!

Doll, W., Fleener, M.J., Trueit, D., St. Julien, J. (Eds.) (2005). *Chaos, complexity, curriculum and culture: A conversation.* **New York: Peter Lang.** Society author Fleener and colleagues are consultants in education to the Chinese government. See article this issue of the NL.

Goodwin, B. (2005). *EDGE: A New Science of Qualities.* **City?/Pub?.** "The 'new' biology is biology in the form of an exact science of complex systems concerned with dynamics and emergent order. Then everything in biology changes. Instead of the metaphors of conflict, competition, selfish genes, climbing peaks in fitness landscapes, what you get is evolution as a dance. It has no goal. As Stephen Jay Gould says, it has no purpose, no progress, no sense of direction. It's a dance through morphospace, the space of the forms of organisms." Dr. Goodwin is a member of the Board of Directors of the Sante Fe Institute. – *Publisher*

Glass, L., Mackey, M. C., & Tiacombe, M. S. (Eds.). (2005). *Nonlinear dynamics in physiology and medicine.* **NY: Springer-Verlag.**

Gruenwald,, P. D., Myung, I. J., & Pitt, M. A. (2005). *Advances in minimum description length: theory and applications.* **Cambridge, MA: Bradford Books**. 372pp. ISBN 0-262-07262-9. The book begins with an extensive tutorial on MDL, with its connections to Kolmogorov complexity. - RAMG

Laughlin, R. B., (2005). A different universe. Reinventing Physics From the Bottom Down. New York: Basic books. Illustrated. 254 pp. Examines the pros and cons of reductionism in physics and biology.

Richardson, K. (Ed.). (2005). *Managing Organizational Complexity: Philosophy, Theory and Application.* **Norwood, MA: ISCE Publishing and Information Age Publishing.** The Institute for the Study of Coherence and Emergence signed a book series deal with Information Age Publishing. This series will primarily publish collections of papers concerning different aspects of the application of complexity thinking. On occasion the series will also include volumes written by single authors.

Richardson, K., Dennard, L., & Morcol, G. (2005). *Complexity and Policy Analysis: Decision Making in an Interconnected World.* **Norwood, MA: ISCE Publishing and Information Age Publishing.**

Richardson, K. A., Goldstein, J. A., Allen, P. M., & Snowden, D. (Eds.). (2005). *Emergence: Complexity & Organization: 2004 Annual, Vol. 6* **(Pb.). Norwood MA: ISCE Publishing.** Organizations of all kinds struggle to understand, adapt, respond and manipulate changing conditions in their internal and external environments. Approaches based on the causal, linear logic of mechanistic sciences and engineering continue to play an important role, given people's ability to create order. But such approaches are valid only within carefully circumscribed boundaries. They become counterproductive when the same organizations display the highly reflexive, context-dependent, dynamic nature of systems in which agents learn and adapt and new patterns emerge. This volume includes articles from Isabelle Stengers, Julie Klein, Sandra D. Mitchell, Glenda Eoyang, Bill McKelvey, William Sulis and many more, which explore a range of complexity-related topics from philosophical concerns through to the practical application of complexity ideas, concepts and frameworks in human organizations. Also included are a series of four reproductions of classical papers in the fields of complexity and systems: "Principles of Self-Organizing Systems" by Ross Ashby (originally published in 1962) "General Systems Theory: The Skeleton of Science" by Kenneth Boulding (originally published in 1956) "Science and Complexity" by Warren Weaver (originally published in 1948) "Emergence" by Stephen C. Pepper (originally published in 1926).

Yalcan, Suykens, & Vandewalle. (2005). Cellular Neural Networks, Multi-Scroll Chaos and Synchronization. Singapore: World Scientific. ISBN 981-256-161-7. The world gets more complicated each week, and this is an example. The publisher says that this book is built on three cornerstones, Cellular neural networks (like Wolfram?) chaos, and synchronization. It is about processing spatial-temporal patterns and wave computing; it is mostly I think directed to electrical engineers and touches on applications to communications, cryptography, global optimization, image and video authentication. It also relates to time-delayed systems. I suspect that some of it would be a plausible metaphor for cognitive processing. – RAMG

Yolles, M. (2005). *Organizations as Complex Systems: Social Cybernetics and Knowledge in Theory and Practice.* **Norwood, MA: ISCE Publishing and Information Age Publishing.**

RSS News Feed Lists Members' Accomplishments

by Steve Guastello

SCTPLS started an RSS news feed system in April, 2005 to bring news of members' accomplishments to the media. Although news feeds are not in widespread use by nonlinear scientists, they are common tools for reporters who work for newspapers, television, radio, science magazines, and similar publications.

Members who would like to access this news feed should load this URL to their news bots: www.societyforchaostheory.org/rssfeed/news.rss. Members who do not have an automatic news delivery service, but who would like to have one, should contact their ISP, or browse their ISP's web site for instructions as to how to access one. Much of the news that appears on the RSS does not appear on the SCTPLS home page, as the latter is reserved for announcements of Society-wide activities. So be sure to check all your sources to stay informed. The following is a listing of RSS items that appeared since the publication of the July-August 2005 *Newsletter*. Other pieces of Society news from the RSS are presented in expanded form in this issue.

Members are of course invited to send their news-relevant stories to the SCTPLS *Newsletter* or to David Pincus

(pincus@chapman.edu), our Membership Secretary. RSS items are also selected from stories appearing in the *Newsletter,* or based on articles appearing in NDPLS.

Dynamics in Business Organizations. Lichtenstein, Dooley, & Lumpkin published "Measuring emergence in the dynamics of new venture creation" in the *Journal of Business Venturing,* June 2005. Contact: kevin.dooley@asu.edu

No consistent link found between the use of oral contraceptives and female breast cancer. E. Glattre & J. Nygard, from the Cancer Register of Norway report that prior findings could be artifacts of inappropriate linear methods of data analysis. Contact: eystein.glattre@kreftregisteret.no

Coordination is the key in disaster management. Much depends on the short-term fluctuations in the team's success levels, according to an experimental report in *Nonlinear Dynamics, Psychology, and Life Sciences*. See Vol. 8, No. 3.

Governmental attempts to control illicit drug use might be producing more chaos than actual control. Doris Behrens (Vienna Univ of Tech) and co-workers explain the conditions under which different dynamics occur and the options for control. Full report: *NDPLS* Vol. 8 No. 3. Contact proffice@societyforchaostheory.org

Binge drinking among college students can be predicted by two variables and a cusp catastrophe model. Expectations of positive effects of alcohol, peers' approval of drinking habits, and the cusp dynamics explain the vast majority of differences in consumption among 1000 students. Contact: Dr. Kelly Kulkoski, kkulkoski@hotmail.com

Nonlinear Economist triggers Tokyo earthquake and Beijing typoon? A Richter 6 quake rattled Tokyo July 23 during Prof. J. Barkley Rosser's invited lecture at Chuo University on speculative bubbles and market crashes just as he uttered the word "crash." Rosser's lecture to a Beijing audience on speculative bubbles and market crashes was met with the onset of a typhoon a week later. Contact: rosserjb@jmu.edu

Dooley and Corman (Ariz State U) examined the rates of news production during the 9/11 crisis. As the immediacy of the crisis fades, news is produced at a rate dictated by the internal mechanism of the new agencies and by other news occurring during a given time period. NDPLS Vol. 8 No. 3. www.societyforchaostheory.org/ndpls/ Contact: kevin.dooley@asu.edu

Nova Science debuts "Chaos and Complexity Letters." Vol. 1 No. 1 released August 2005. Original research, reviews tutorials, speculations, data base availability. Journal covers a wide range of topic in nonlinear dynamics and their applications. Contact Franco F. Orsucci, Editor in Chief, franco.orsucci@ixtu.org

Liebovitch appointed director of Center for Complex Systems & Brain Sciences, FAU. Founded by Dr. J. A. Scott Kelso in 1985, the Center for Complex Systems (www.ccs.fau.edu), the center brings together an interdisciplinary team of laboratory biologists, psychologists, applied mathematicians, and theoretical physicists to answer questions such as: How do genes work together to form a cell? What happens when a nerve is damaged? How are nerve cells connected together in the brain? How do we respond to what we see? How do we control our movements? How do we understand speech? How do we play and listen to music? The Center is also a home for a unique Ph.D. program where students learn how biological experiments, medical imaging techniques, and mathematical computations can be combined to learn about the brain and other complex systems.

Crawdad Technologies releases new Text Analysis System (software). Crawdad 1.2 embeds Centering Resonance Analysis (CRA), which uses natural language processing to create a network model of text. Provides a number of text analytic modules to browse and visualize individual texts, compare texts, sort texts into clusters, search, and develop themes. You can export word influences into your favorite stats package. More features. Windows platform. 30-day free trial offer available. Contact: dooley@crawdadtech.com

Images of a Complex World – Chaos, Fractals and Poetry – R. Chapman & J. C. Sprott. [See book information in this issue of the *Newsletter*, Nonlinear Dynamical Bookshelf.]

Mary Ann Metzger Honored at Denver Conference

PICTURE: Prof. Metzger speaks to the conference after receiving her award. Courtesy of Ivy Lazzarini

The Society honored Mary Ann Metzger at the conference banquet at the University of Denver for her long-standing contributions as SCTPLS Secretary. The red and black lacquer plaque read, "For outstanding and dedicated service, wisdom, and inspiration to SCTPLS. Secretary, 1998-2005."

Mary Ann was the first person most people met when joining the Society during those years. The warm recognition that she receives from so many members has been important in building a cohesive organization.

Jacobsen Appointed Public Relations Officer

The EC recently voted to appoint Joseph J. Jacobsen as the new PR Officer. Joe has been a member since 2003, and has worked consistently as a volunteer helping with organizing mailings and other communications with the membership. Joe is from Milwaukee, WI. He has a Ph.D. degree in Organizational Studies and is currently completing his PhD in this area through the psychology department at Marquette University. His central professional skills are in engineering management, but that's not all he can do. He is doing research examining nonlinear models involved in the development of innovative methods and technologies in energy systems and how they relate to people who operate such systems. He teaches statistics and mathematics and his research interests are in the diffusion of innovations from science to the marketplace, planned performance modeling and nonlinear dynamics applied to a variety of disciplines. Some of you might have caught his presentation at the Conference in Denver. He's also run some important events for the City of Milwaukee and he has contacts with local media pertaining to city-related business. We believe that this set of experiences will generalize well to new cities on our behalf. His organizational skills and expertise should lead to some consistent, yet innovative strategies to promote our organization and the work of our members.

SCTPLS Business Meeting Minutes
Denver, August, 2005
Submitted by David Pincus, Secretary

President Holly Arrow called the meeting to order in Denver, CO, USA on August 6, 2005, with 20 members present. President Arrow introduced Matthijs Koopmans as the President Elect and performed the traditional ceremonial passing of the societies' set of nested Russian dolls. President Arrow then invited comments on the current conference. Comments by members: transportation to and from the airport was somewhat difficult, signage around the conference was at times found by some to be insufficient and confusing, and too many cancellations by speakers led to some last minute re-arrangements and holes in the conference schedule. Some initial discussion targeted ways to solve these problems in the future. Positive comments centered on the quality of the presentations and the open, interdisciplinary experience that ran through the conference as a whole. **Motion: to accept the minutes for the 2004 meeting as published in the newsletter. Motion was passed unanimously.**

President Arrow asked for proposed location and on-site volunteers for Conference 2006. **Locations nominated were: Toronto, Montreal, New York, Baltimore and Miami. In addition a Friday to Sunday schedule was proposed.**

Treasurer Stephen Guastello read and summarized his written report (see full report below).

Standing, special and other formal reports submitted by committee chairs are listed at the end of these minutes.

Executive Committee: Chair Holly Arrow and other committee members reported on committee activity including: creation of the media committee, appointment of public relations officer Meg Spohn, and appointment of a new chair of the membership committee Sara Ross.

Conference Committee: No further report was given.

Nominations and Elections: Chair Jeffrey Goldstein called for a report by the secretary on past nominations for president. Nominations made prior to business meeting were reported: Steve Guastello declined, Matthijs Koopmans accepted, and Ivelisse Lazzarini nominated herself and was seconded. **Motion: slate of candidates for mail ballots for presidency passed unanimously.**

Publications Committee: Stephen Guastello summarized the written report (see below) on the status of the journal, newsletter, website, books, and related matters.

Media Committee: Chair Mark Filippi gave an oral summary of the committee activities from the past year. No written report was submitted.

New PR officer Meg Spohn reported on her activities from the past several months. No written report was submitted.

Membership Committee: President/chair Holly Arrow provided a brief summary report for Sara Ross who was not present. No written report was submitted. **Motion: to reauthorize the committee for another year. Motion passed unanimously.**

Education Committee: Chair Larry Liebovitch was not present. Other committee members summarized committee activities. No written report was submitted. **Motion: to reauthorize the committee for another year passed unanimously.**

INSC Committee – Chair Ivelisse Lazzarini reviewed plans for the upcoming INSC conference in Crete. No written report was submitted.

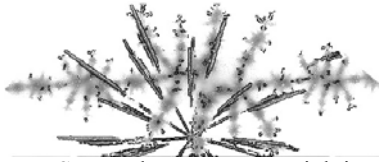**Old business:** None was identified to be discussed.

Motions pertaining to constitutional review (CR) process: 19 were present to vote (13 minimum required to approve an amendment to the Articles of Organization). Jeffrey Goldstein acted as chair for the discussion of CR motions. Following discussion of the motions, motion 1 was voted down with 7 in favor, 12 against, and 1 abstention. Following the vote on motion 1, Chair of original CR committee Fred Abraham brought up the fact that no further votes could be taken on the remaining motions because they were each yoked to motion 1. No further votes were taken. **Motion: Fred Abraham made a motion to reauthorize committee with current members plus one replacement. Motion amended by Fred Abraham for reauthorization of committee with complete change in committee membership.** No second was made. Discussion continued. **Fred Abraham withdrew both motions.** Discussion continued. **Holly Arrow moved that "the membership charge the new president [Matthijs Koopmans] to move forward with some process of constitutional review." Motion passed with 11 in favor, 3 against, and 1 abstention.**

Meeting was adjourned without objection.

Publications Committee Report
Annual SCTPLS Conference Business Meeting
August 6, 2005

The committee members are: Stephen Guastello (Chair), Holly Arrow (Ex-officio) Koen de Prych, Terrill Frantz, Tim Haslett, and Robert Porter, The Publications Committee accomplished the following things this year:

NDPLS. We have two special issues on nonlinear methods scheduled for October 2005 and April 2006. The featured cover artist will be Gert van Tonder, whose theme is the fractal nature of Japanese dry rock gardens. Special thanks go to Richard P. Taylor for making these arrangements with Dr. van Tonder. Richard will continue on as our Art Editor for another year.

NDPLS' institutional subscription level currently stands at 32, which is 100% of last year's level. Additional sales are in progress, however.

The following series of photographs illustrates how *NDPLS* is prepared for delivery to all our members and subscribers.

PICTURE BELOW (provided by Prof. Guastello): *NDPLS is stuffed into envelopes, sealed, and addressed. A few copies have been decoratively placed on top of the piles.*

The promotion on the SCTPLS site that gives visitors to NDPLS limited free access to articles continues to draw new people. Nearly 500 visitors downloaded articles since the program began in June, 2004. Those folks' e-mail addresses are retained for future announcements.

NDPLS is displayed at six major conferences of reference librarians throughout the year. This venue is arranged through the Ebsco Sample Book and Issue program; a kiosk prominately displays books and journals at targetted conferences.

Web Site. An RSS feed button was added to the home page to facilitate news access (in addition to what is regularly placed on the home page news alerts and archives) whereby users can receive news messages regularly, at the time interval of their choice. Users need to sign up for an RSS feed system through their IP in order to take advantage of this option. Although this system is not widely used by nonlinear scientists, it is common practice for news media and agents.

A new web area is planned under the probable name of "press room," which will feature media materials that have been prepared by our Public Relations Officer (Meg Spohn). Her first batch of press kits was circulated in July, 2005.

The tutorial section of the site will be expanded significantly into a section to be known as "Resources for Teachers and Students." Matthijs Koopmans, who will be replacing Holly as the ex-officio member (president) starting in September, is taking the lead to compile material for this section of the site. Tim Haslett has made arrangements to acquire demonstration programs for agent-based modeling; the first demo has been received from a software distributor in the Chicago area.

Members can now link their home pages to the "links" section of the SCTPLS web site by listing their URL in the space provided on the membership (renewal) page on the web.

Newsletter. Koen dePrych generated some alternative graphic designs and layouts for the Newsletter. No specific decisions have been made at this time.

Many of the Newsletter issues that were dated before October 2002 have now been scanned. They will be appeared in the Newsletter section of the SCTPLS web site in the coming membership year. Newer issues are now being prepared for loading to the site without scanning, and they are scheduled to be available in the archives after a three-year interval from the date of their initial publication to members.

Treasurer's Report
15th Annual International Conference of the Society for Chaos Theory in Psychology & Life Sciences August 6, 2005 (Updated August 28, 2005)

This report summarizes the financial results for the Society for the fiscal year ending 31 March, 2005. The final net for this year was $3596, which was more than double that of last year, and within the range of our net during the years in which we published *NDPLS* with Kluwer. SCTPLS has been running at a modest surplus consistently since June 1994. The following sections of this report provide the financial details of the Society's operations, the status of special funds, and a description of a new procedure that was adopted by the Trustees for the establishment of a General Finance and Accounting (GFA) Office.

Details of Operations

Line A: Net receipts from last year's conference were particularly good relative to our history, even though the attendance (69 people) was the lowest in the preceding five years. This disadvantage was more than counterbalanced by the exceptionally good deal on facilities that we received from Marquette University. Line B is self-explanatory.

Line C shows receipts from Institutional subscriptions to *NDPLS*. During the last fiscal year we sold a total of 39 subscription between the late 2004 purchases and the 2005 purchases. The institutional subscription level 2005 now stands equal to that of 2004, or 32 subscriptions. All production expenses for *NDPLS* have been applied to Line D.

Line D reflects 4.5 consecutive issues of *NDPLS* that were produced under our self-publication system. Production was speeded so that the expenses for the April 2005 issue were paid by the end of the fiscal year. The cost of producing 4 consecutive issues of *NDPLS* is expected to drop by as much as $2000 for the current fiscal year. All credit card expenses for the conference and membership are posted to Line D.

Table 1. Financial results for FY 2004.

Project	Net Income
A. 2003 Conference in Milwaukee	$5499
B. Deposit on 2005 Conference in Denver	(500)
C. Institutional Subscriptions to NDPLS	7027
D. Membership fees, donations, journal and Newsletter, general operations, less expenses	(6791)
E. Advertising	(2460)
F. Interest on accounts	1791
G. Allocation to special funds	(970)
Final net	**$3596**

Our membership currently stands at 294 active members as of 28 August, 2005. This number represents an improvement of 11 members since the end of the last conference and a drop of 16 members since the end of the 2003 conference. The 2003 membership level of 310 was a high water mark for us. We look forward to the INSC conference in Greece and the activities of our new membership committee chair during the next membership year.

Line E reflects three print advertisements that the Society ordered during the year. Two of the ads were printed in the *GradPsyc*, published by the American Psychological Association. The third was published in the *Observer*, published by the American Psychological Society. A small amount (approximately $200) was used to promote *NDPLS* at several librarians' conferences throughout the year. Line F is self-explanatory.

Special Funds

Line G: The Society established two special funds in April 2004. The Student Scholarship Fund provides for waivers of conference registration fees for student members who have a technical presentation accepted for the annual conference. The International Hardship Fund provides for reductions in conference registration fees for members who have a technical presentation accepted for the annual conference and who have made a reasonable claim for hardship; travel from a currency-impaired country is the primary example of hardship addressed by the fund program. Other than the qualifications described above, applicants are given awards on a first-come first-served basis to the extent that resources allow.

The two funds were seeded by contributions from members and by the Society's own resources. Disbursements are reflected as a lessened amount in Line A. A total of $400 was distributed in this fashion in FY 2004. The fund surplus is shown as a negative amount in Line G and we expected to use it in its entirety for the 2005 annual conference.

Table 2. Status of special funds for FY 2004.

Student Scholarship Fund	Amount
SCTPLS contribution	$1000
Donations received	125
Awards made	(400)
Fund balance	**725**
International Hardship Fund	
Donations received	245
Awards made	0
Fund balance	**245**

New GFA Office

In an effort to prepare for organizational growth and to safeguard the delivery of membership services from interruption, the Trustees approved the following plan to divide the work that is currently performed by the Treasurer into two functions. The General Finance and Accounting Office will be responsible for administrative services and will fall under the auspices of the Trustees. The Treasurer will continue to perform executive functions and will remain an officer on the Executive Committee. This procedure was approved by the Trustees in June 2005 for Fiscal Year 2005 and thereafter. It does not involve changes to the existing text of its Articles of Organizations.

The Trustees are ultimately responsible for the financial and legal integrity of SCTPLS. This action falls within their auspices. The provision below for establishing a nominally paid position thus falls under the auspices of the Trustees. Also, the Society has been accumulating assets in excess of the 15% of gross receipts during the past five years and this trend is expected to continue. Appropriations for amounts in excess of the 15% fall within the purview of the Trustees.

The General Finance and Accounting Office (GFA). The GFA will maintain SCTPLS business headquarters at Post Office Box 484, Pewaukee, WI, 53072

and at Marquette University, Department of Psychology, P. O. Box 1881, Milwaukee, WI 53201 (561 N. 15th St., Milwaukee, WI 53233). The direction of the GFA will fall under the auspices of the Trustees.

GFA will receive and process all monetary receipts for membership, conference registrations, institutional subscriptions to *Nonlinear Dynamics, Psychology, and Life Sciences (NDPLS)*, book catalog sales, and miscellaneous sources. GFA will maintain the credit card system and all *SCTPLS* bank accounts. Trustees will be signatories to these accounts as they are presently.

GFA will pay all accounts payable in the course of business as usual and for special projects as defined by the Executive Committee. In the case of a contract negotiated by the Executive Committee with outside agents, e.g. for the annual conference and business meeting, the Executive Committee will notify the GFA when that contact has been arranged, and when deliverables have been received and ready for payment.

As part of business as usual as described above, GFA will manage the printing and mailing of NDPLS, the Newsletter, September and February dues collection letters, and the annual poster distribution. Other printing and distribution will be determined by arrangement with the Executive Committee or Chairs of other Committees as required.

GFA will file the Society's annual income tax, maintain postal permits, and service audit requests from the Internal Revenue Service and United States Postal Service.

The person responsible for the functions of the GFA will be known as the Chief Financial Officer (CFO) for the Society and will be noted as such on the Society's income tax statement. The first incumbent in this position will be Stephen Guastello. The Trustees will appropriate $2000 per year to operate the GFA, either directly to the CFO or to outsource agencies. Unless otherwise stipulated by contractual agreements with outsource agencies, this amount will be paid at quarterly intervals (June 30, Sept. 30, Dec. 31, and March 31), and will compensate labor as defined above only.

Treasurer. The primary function of the treasurer will be to advise the Executive Committee on the financial aspects of any business proposals they wish to consider. The Treasurer will plan for the future financial growth of the Society and ensure the stability of its continued operation. Examples might include planning a membership expansion project, recommending adjustments in membership fees to keep pace with costs or inflation, planning the financial aspects of the annual conference to result in a surplus.

The Treasurer will solicit and evaluate proposals from facilities to host the annual conference, develop the specifics of the contract with the host facility, authorize payments, and otherwise act as the contact person for the host facility on behalf of the Society for financial matters. The Treasurer will order books for the resale table at the conference and take custody of unsold stocks afterwards.

The Treasurer will assist the GFA in preparing the annual accounting statement and make the Treasurer's Report to the membership at the annual conference. (All other financial reporting falls under the auspices of the GFA and Trustees as defined above.)

The Treasurer will conduct the foregoing functions in conjunction with other members of the Executive Committee as necessary.

Implementation. This separation of the functions of the Treasurer and GFA will take place immediately upon acceptance by the Trustees. This reorganization of functions for the establishment of the GFA was filed with the IRS in conjunction with our income tax for Fiscal Year 2004 in July 2005. The establishment of the GFA will be announced to the membership at the Annual Business Meeting that is scheduled for 6 August 2005 as part of the Treasurer's Report.

The establishment of the GFA will produce no visible change in SCTPLS business processes so long as Stephen Guastello remains Treasurer on the Executive Committee. When a new Treasurer is appointed (or elected pending an amendment to the Articles of Organization), there will be two people performing the jobs as specified above.

Submitted by:
Stephen Guastello, Ph.D.
Treasurer and CFO for SCTPLS

Society for Chaos Theory in Psychology and Life Sciences Historical Factoid:

Presidents of The Society:

Larry Vandervert 1991-2

Fred Abraham 1992-3

Sally Goerner 1993-4

Jeffrey Goldstein 1994-5

Stephen Guastello 1995-6

William Sulis 1996-8 (two terms)

Bob Porter 1998-2000 (two terms)

Kevin Dooley 2000-2002 (two terms)

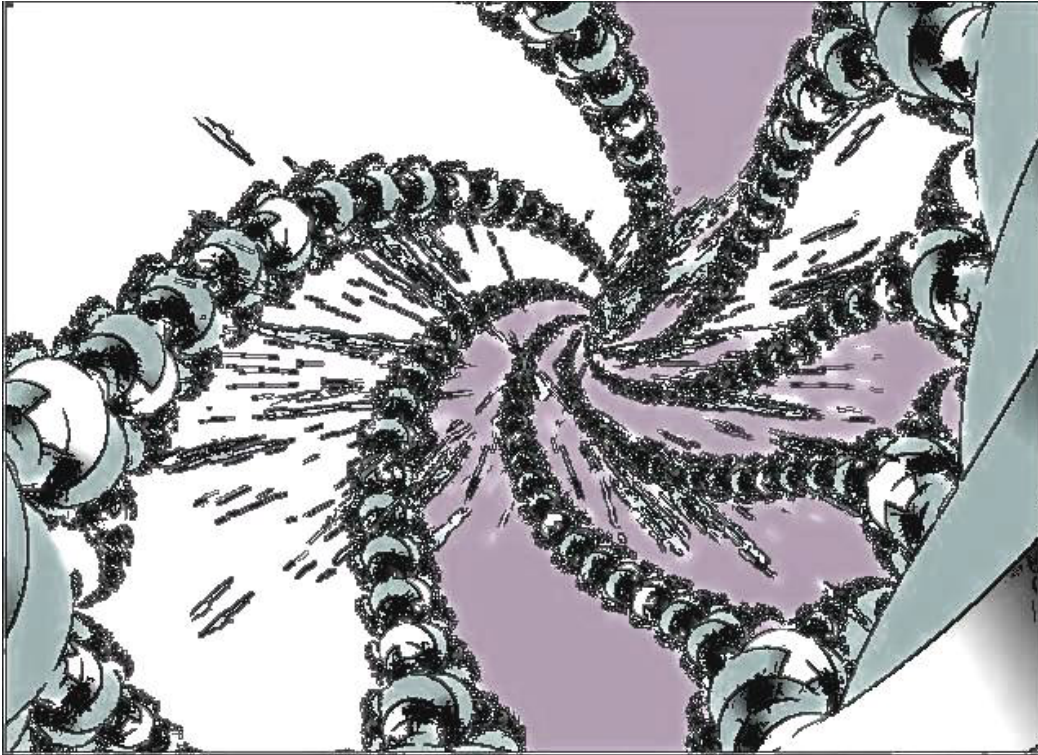Dick Bird, 2002-2003

Holly Arrow 2003-2005 (two terms)

Matthijs Koopmans 2005-present

FIRST CLASS AIRMAIL EVERYWHERE

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