

SOCIETY FOR CHAOS THEORY IN PSYCHOLOGY & LIFE SCIENCES

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Richard Bird, Ph.D., President; Robert Porter, Ph.D., Editor;
Stephen Guastello, Ph.D., Production Editor

Revolutionary History, Academia, Lobsters, and Popular Attractions **13th ANNUAL INTERNATIONAL CONFERENCE** and Business Meeting

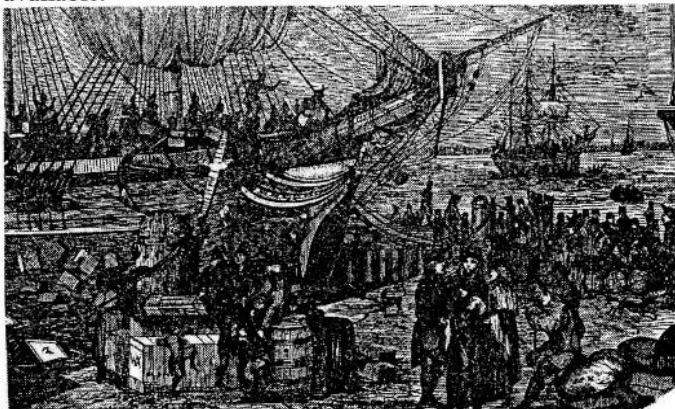
BOSTON -- AUGUST 8-10, 2003

Also

**Holly Arrow Elected Society President
Krippner and Gregson Honored**

SOCIETY RETURNS TO BOSTON Call For Papers In This Newsletter

Our 13th Annual International Conference will take place in Boston Aug 8-10. The location will be Boston University Campus, a reprise of the 1998 meeting. This year's focus is Big Questions, Tough Problems. Dr. Clifford Brown (Tulane University), who studies social and economic organization of the Maya Culture, will be one of our keynoters. A call for papers, and more information and highlights appear inside. Be sure to check the Society's website for new developments ([www/societyforchaostheory.org/conf03.html](http://www.societyforchaostheory.org/conf03.html)) as they become available.



Historic Boston Tea Party, December 1773.

Holly Arrow President Elect

The officers and trustees of SCTPLS are pleased to announce that Holly Arrow has been elected President of the Society for the 2003-04 membership year. Holly has already started her first job as president-elect, which is to organize the annual conference at Boston University. Holly, meanwhile, is looking forward to meeting as many members as possible at the INSC conference in Vienna next month. Holly writes: "I hope to focus on growing our membership via recruiting, retention, and retrieval of lapsed members. I also greatly value the role of SCTPLS in educating interested scholars like myself in how to apply the ideas and methods of chaos, complexity, and non-linear dynamics, and will be exploring ways to further develop that role in collaboration with other institutions and organizations-- including other societies in North America, Europe and elsewhere that have a similar mission."

James Yorke Wins Japan Prize

James A. Yorke is well-known to us as the man who introduced the word "chaos" to the mathematical lexicon. The Baltimore Sun reported December 17, 2002 that "Yorke will share the 2003 Japan Prize in science and technology for his pioneering work in the relatively young mathematical field of 'chaos' theory. His theoretical research, and that of his multidisciplinary Chaos Group at Maryland's Institute for Physical Science and Technology, is now being used to

illuminate complex real-world problems as diverse as infectious disease transmission, weather forecasting and population changes in biological systems." Yorke was a featured speaker at the SCTPLS annual international conference in Baltimore, 1994.

Sun Staff reporter Frank D. Roylance continued, "The Japan Prize, announced Tuesday in Tokyo, carries a \$412,000 cash award. It is also an international honor highly regarded by scientists, who rank it just below the Nobel Prize and the Fields Medal in mathematics.

"Yorke, 61, of Columbia, will share the honor (and split the cash) with Yale mathematician Benoit Mandelbrot, who is being honored 'for his work in the study of fractals, complex natural shapes that repeat themselves at different scales, [and] knowledge [that] served the cause of peace and prosperity for mankind.'"

President's Letter

This has been an eventful year both for the Society and for me. Following the very successful conference in Portland, I went on sabbatical travels. A backlog of work awaited on my return, among other concerns my job as Secretary to the INSC conference in Vienna, the first venture of its kind sponsored by the Society outside the North American mainland. By the time this appears we will hopefully have completed a successful conference and all congratulations are, I believe, due to Bob Porter, the conference Chair, in initiating this major event.

While the INSC venture is a first for SCTPLS I believe it will be the first of a series. In order to extend, the Society must internationalize as much as possible and this involves the participation and co-operation of members in many countries, from Australia to France and from Japan to Canada. Events such as INSC should supplement, rather than replace, the present activities of our Society and if this can happen there will be a process of mutual reinforcement between different areas of what is fast becoming a globalized world.

In this regard I feel we must find ways of increasing opportunity, and removing disadvantage, for some very distinguished workers from economically depressed areas—I have in mind here third world countries as well as the former Soviet Union and its satellite states. Many of the latter are among the new intake to the European Union and so conditions will hopefully improve, but meanwhile many workers are still prevented from full participation in international activities by very low incomes in previously high status jobs. I hope we can find a way of widening participation for these and other people and exchanging vital work with them.

The recent sad death of Arthur Winfree brings to mind a case which illustrates these points. Winfree worked on the spiral waves of chaotic reaction formation known as the B-Z reaction, but had to rediscover them for himself, not knowing of the work already done by Zhabotinsky and Zaikin in the Soviet Union because the literature was not available to him. A figure of speech in chaos circles might well become "reinventing the B-Z reaction"! It is clearly important to find ways of learning from the work of others so as to avoid this syndrome.

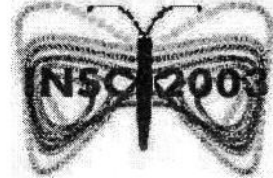
In conclusion I would like to offer my hearty congratulations and support to Holly Arrow, our new President-elect. I wish her every success and I am sure she will be outstanding in her new role.

--Dick Bird, President SCTPLS

Large Turnout Expected INSC 2003 Vienna Meeting on Track

Bob Porter, INSC 2003 Chair, reports that the SCTPLS-sponsored international meeting is exceeding expectations in terms of submissions and registrations.

The meeting, to be held in Vienna, Austria, February 7, 8, and 9, had over 140 abstracts submitted, according to Richard Heath, Scientific Program Chair.



A wide variety of topics are covered and speakers represent over two dozen countries. The program for the meeting can be accessed from the SCTPLS website, or contact Bob at rjporter@mindspring.com.

Terror at Portland

Reported by Dick Bird

SCTPLS sponsored a Special Focus at the Portland Conference in August 2002 on "Terror and Response" within a wide context, including: understanding terror and its motivation; the organization of terror networks; possible measures to detect terrorists, counter their activities and alleviate the suffering of their victims. There was a magnificent response to the call for papers, and three half-day sessions were devoted to this topic.

Following a general introduction which I gave, Kevin Dooley described the unfolding pattern of events after 911 in terms of network analysis of the key terms used in the media, an approach previously applied successfully in many other areas. In following papers Deborah Sword vividly described how conflict escalation can be analyzed in terms of complexity theory, Holly Arrow gave an acute analysis of people's attachment to causes in terms of social network theory while Ken Bausch addressed the hegemony presently enjoyed by the United States and questioned its permanence. William Johnston's suggested that the terrorist-US conflict was based on one side trying to wipe out the other's cultural memes and Phyllis Chiasson discussed the absolute certainty that possesses the terrorist and suggested measures of cognitive complexity that might be applicable to recognizing this.

Among the other outstanding presentations on Day 2 was Stephen Oyer-Owens paper on a technology for countering Terror based on the Sacred Pipe Ceremony of Black Elk. This was the most radical perspective on the subject as it held out no prospect of overcoming terror unless at some stage we adopt such an approach. Also illuminating was Jada Prane's interpretation of terrorists' behavior in terms



Robert Gregson Honored In Portland

Reported by Fred Abraham

The society awarded Robert Gregson a plaque with this inscription at the annual dinner of the Society, August 3 for his pioneering nonlinear psychophysical modelling and long productive research career, and for his contributions to the society both for his editorial work on our journal, *Nonlinear Dynamics, Psychology, and Life Sciences* and for his participation, including supplying of useful and bibliographic information (hard to keep up with in our diffuse sources) on our electronic discussion venue, CHAOPSYC. After the presentation, Robert's appreciation was expressed by video. Dick Bird expressed it for all of us when he in turn, appreciated Robert's genuine humility and appreciation of the award. Robert more than deserves this small token of our recognition, and we all owe Robert a debt of gratitude for his contributions and participation.

His curriculum vitae revealed that he was born in 1928 in England, is married with two children and two grandchildren. He is a citizen of New Zealand. He received two B.Sc (1951, Nottingham University, Mechanical Engineering; 1955, University of London, Psychology with Statistics), a Ph.D. (1961, University of London, Experimental Psychology), and a D.Sc. (1998, Australian National University). His early career of about 12 years was in research in the private and governmental sector, sometime on classified projects, and mainly in psychophysics as it affected productivity. For the next 17 years he held a faculty post at the University of Canterbury, New Zealand (Full Professor, Personal Chair 1967-1980). The third trimester of his professional career has been in Australia, obviously not slowing down with his emeritus status from the University of New England as of 1991), and has been Visiting Fellow at Australian National University (1991-1996; now emeritus there). Over the years he has held many visiting posts in Europe and the US, has been Fellow of many societies, has been on the editorial board of many journals, and on many scientific review boards including those in the fields of alcohol, tests and standards. One of the interesting posts he held was co-director of psychological research at Scott Base, Ross Dependency, Antarctica.

Kevin Dooley Appointed Trustee

Kevin Dooley, Past President of SCTPLS, was appointed Trustee by unanimous vote of the officers and trustee of the Society on September 2, 2002. The tasks of the trustees are to oversee the compliance of the Society with its own constitution (Articles of Organization), officiate elections of officers, and to oversee the financial performance of the Society and assure its compliance with relevant laws. Kevin's appointment filled a vacancy created by the retirement of Keith Clayton from the position earlier this year. The other trustees are Jeffrey Goldstein and Stephen Guastello.

of borderline Multiple Personality Disorder. In the discussion which followed, Lori Griffin proposed that MPD patients may be distinguished by gait. (Jada also offered the fascinating insight that MPD must be culturally related, because it is very rare in Britain!) Raddai Raikhlín was unable to attend following the sad death of his son, and his paper, based on his work on Civil War, Terrorism and Gangs. *Social Dynamics* was delivered in absentia.

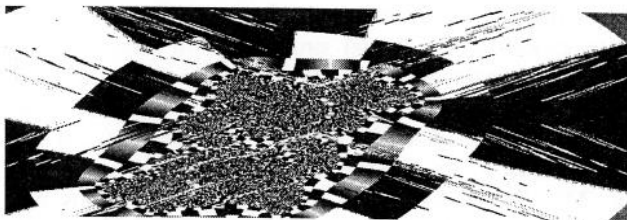
A multiplicity of approaches from diverse viewpoints stimulated, at least in the view of this Convener, a whole range of new and exciting ideas. – Dick Bird

Stanley Krippner Honored by APA

Stanley Krippner, who has been an SCTPLS member since the Very Beginning, received an award from the American Psychological Association for his Distinguished Contributions to the International Advancement of Psychology. The award was presented at the annual APA conference, which was held in Chicago, August, 2002.

The citation read, "To Stanley C. Krippner, Alan Watts Professor of Psychology at Saybrook Graduate School, outstanding investigator of dreams, hypnosis, and anomalous phenomena; pioneer in reinforcing and extending the humanistic aspects of psychological science; author coauthor and editor of over two dozen books and more than 1,000 research articles, theoretical essays, book chapters, and reviews. For his outstanding efforts to expand the frontiers of the psychological study of consciousness, for his unstinting service interpreting indigenous traditions of world cultures for Western audiences, for his dauntless achievements in promoting psychology as a vehicle for world peace, for his uncompromising standards as a scientific researcher, for his compassionate mentoring of generations of devoted students, and for the generosity with which he has welcomed scholars from two dozen countries into both his worldview and the psychological profession, his colleagues in the American Psychological Association take great pride in bestowing on him the Award for Distinguished Contributions to the International Advancement of Psychology."

The award citation and selected bibliography were published in the *American Psychologist*, November, 2002, pp. 960-961. The citation was followed by an article by Stanley Krippner entitled, "Conflicting Perspectives on Shamans and Shamanism: Points and Counterpoints" (pp. 962-977). SCTPLS members might also want to read his article, "Dreaming as a Function of Chaos-like Stochastic Processes in the Self-Organizing Brain," co-authored with David Kahn and Allan Combs in the October, 2002 issue of *NDPLS* (pp. 311-322) to see how some of Dr. Krippner's work connects to nonlinear dynamics.



REPORTS FROM THE CUSP

Editor's Note: Short research articles, book reviews, and other items of interest are solicited from all members for consideration for publication in REPORTS FROM THE CUSP. Articles are reviewed by the editor and those selected may be edited for length. Ordinarily, only one item will appear per newsletter. Contributions are always welcome.

Is There a Role for NLDS Theory in Teaching the Practice of Psychotherapy?

By Domenic Ali

Most psychotherapists early in their training are more preoccupied with how to do therapy than how to understand it. Unfortunately most theories of therapy don't say much about how to do it; hence, the never-ending questions from students about "What do I say exactly?" and "There are a lot of different things I could do but how do I decide which one to do?" or "I'm still not clear how I'm suppose to come up with a case formulation from these guidelines?" As they say, from the mouth of nubile come the most philosophically deep questions. Since taking over the Brief Psychotherapy Traineeship at the UCSF AIDS Health Project five years ago, I have come to revisit these questions, not as a student but as a teacher. And I have come to be dissatisfied with how current clinical theory answers (or remains oddly silent about) these issues. In trying to find a more satisfactory answer to the central question, "How do you *do* therapy?" I have wondered to what degree nonlinear dynamic systems (NDS) theory might be of value. How I got to this wondering and how I'm trying to make use of NDS theory in my teaching of psychotherapy is what I want to briefly describe here.

My introduction to NDS theory came in 1980 when I was a graduate student in chemistry at UC Berkeley. One of the other graduate students in our research group was exploring the class of chaotic trajectories which develop on a Henon-Hiles potential energy surface in hopes of better understanding certain chemical reaction dynamics. As I recall, this didn't go anywhere, but the idea of chaotic attractors and nonlinear dynamics stayed with me. Ten years later when I found myself working as a psychotherapist (how this change occurred is a long story I can't go into here except to say it involved a meditative walk in Christ College at Oxford University) I wondered how to make use of my training in theoretical chemical physics in my work as a therapist (my social work thesis compared the conceptual structure of quantum mechanics and transference – amazingly, the program allowed me to do this!) but was unable to find a practical solution to this question. Like some, however, I took notice and was tantalized by the similarities of many of the psychotherapeutic processes and NDS theory: emergence, order within disorder, abrupt changes in state, etc. But how to take these hunches and turn them into more than metaphorical curiosities left me stumped.

Fast forward to last year when serendipitously I discovered this Society and was almost giddy to see how many researchers were seriously thinking about how to apply NDS theory to psychology and the life sciences. I immediately

joined, bought back issues of the journal and some books by the authors publishing in it and immersed myself afresh into the world of NDS theory. I couldn't help but fear that I would once again end up disappointed in not finding a hile, I have formulated some testable speculations that appear promising.

Practicing psychotherapy at the AIDS Health Project, a community mental health setting, entails working with a diverse range of clients as well as teaching graduate students from many local clinical schools with their own theoretical orientation and "culture." Finding a clinical model that is a good fit for all these characteristics is a challenge that one cannot fully appreciate until put in this position. My approach to this dilemma has centered on the one factor common to all psychotherapy approaches – psychodynamic, cognitive/behavioral, existential, interpersonal, systems-oriented, or supportive: they all involve a conversation between therapist and client. The concept of conversation is also a natural and intuitive entry point to teach the practice of psychotherapy as it helps students manage their performance anxiety that is inevitable as they learn by doing. After all, almost everyone knows how to have a conversation – therapy is just learning how to have a special kind of conversation and keeping it on track. This simple starting point, the moment-to-moment verbal and non-verbal exchanges over time, has proven very productive. But what, you ask, has this got to do with NDS theory?

A clinical conversation is a conceptual and gestural exchange between two complex adaptive systems and, under the right conditions, has the potential to develop into a complex entity in its own right. If we define the moment-to-moment exchanges over time between therapist and client as a *discourse*, then we can consider a conversation to more specifically refer to the multi-level complex structure that is formed by *this discourse over time*. This line of thinking requires we have a set of variables to represent the discourse. One example of a step in this direction is a paper by Pincus (Pincus 2001) where he describes having codified a family discussion according to who was speaking, the speaker's affect, whether the speaker's statement was conciliatory or conflicting and whether the speaker was reading from a question sheet provided as part of this experiment. Pincus then calculated the Shannon Entropy and Topological Entropy of this four dimensional discourse trajectory in hopes of determining if any of the discourses were self-organizing. Without getting sidetracked into further details of this study or the degree of his success, the point for our purposes is that it was possible to represent a discourse in a multidimensional state space (let us call this a Discussion Space) which then allows further mathematical analysis.

Following this idea a bit further – that of projecting a conversation onto a mathematically-definable space – we can imagine using the tools of NDS theory to answer questions like, Does the conversation form a dynamic attractor? Does the conversation have a fractal structure? Can discontinuous changes in the conversation be classified according to a finite set of topological forms? Such question might seem the musings of some misguided wanna-be mathematician. If so, however, at least I'm not alone. Taylor, Micolich, and Jonas (Taylor, Micolich et al. 1999) asked similar questions not about conversation but about painting, more specifically about Jackson Pollack's now famous drip paintings. By using fractal

analysis techniques, they were able to demonstrate that his paintings not only have a fractal structure but that the complexity of the fractal patterns increased chronologically as he mastered his drip technique. A moment's reflection should leave one speechless at this finding – that Jackson Pollack was making fractal paintings simply by "adopting nature's rhythms when he painted" as Taylor recently phrased it in a Scientific American article (Taylor 2002). In fact, Taylor went on to show that when shown a series of fractal images, people consistently expressed a preference for images with fractal D values between 1.3 and 1.5. In other words, people were able to subjectively identify a complex mathematical property. The relevance of this to conversations should be obvious: not only might conversations show a fractal structure which can be measured but people may subjectively prefer conversations with the most complex fractal structure. And why should this matter? Because, even more amazingly, Taylor used skin conductance tests to show that the subjectively preferred abstract paintings with midrange fractal dimensions lowered a person's stress. If something similar were true of conversations – that midrange fractal conversations lowered stress *and we could both subjectivity and quantitatively identify these conversations* – this would have important consequences for the practice of therapy. Unlike abstract paintings, however, conversations do not suggest an obvious set of variables to work with. How one would go about identifying such variables is no easy task but Pincus' work suggests this need not necessarily be a hopeless endeavor.

With these sort of hunches in mind, I began to phenomenologically examine the conversations in the therapy sessions I conduct and noticed there appeared to be three forms of conversation that emerged in the work which are strongly suggestive of the three types of dynamic attractors: fixed/periodic, chaotic, and stochastic. I propose that one of these types – let us call it Type II – corresponds to a chaotic attractor and I believe is the most important to the psychotherapy process. In a review of 15 therapy cases (admittedly, a very subjective one based exclusively on my clinical work), those which often involved this Type II conversation (to be further defined below) were much more likely to lead to behavioral change for the client as measured by the OQ-45, a well-researched outcome questionnaire. Whether this type of conversation truly correspond to a chaotic attractor is something which, in principle, can be empirically verified by methods similar to the ones described above.

But all is not rosy in wonderland. As Lipscomb (Lipscomb 2002) has so eloquently and persuasively argued, many psychotherapy theorists are doing nothing more than pointing out metaphorical connections between NDS theory and the psychotherapeutic process and claiming to have developed a model. This, in large part, results from their lack of training in mathematics and being distracted by the coincidental use of the same word in two unrelated fields. For example, what a mathematician means when he says a system has "emergent" properties is a very well-defined and rigorous statement whereas what a psychotherapist means when he says insight "emerged" in the therapy session is a comparatively loose statement that is ultimately impossible to verify, i.e. how do we measure if the insight actually "emerged" as opposed to developed, evolved, constructed, or anything other descriptor

you like? My hope is to avoid this kind of error by considering how one might go about verifying my hypothesis via a combination of NDS methods and discourse analysis, a very detailed coding and analysis of the verbal and non-verbal exchanges in the therapy hour. And then, of course, doing it.

If this turns out to be true (oh, joy of joys), then the next step would be to use qualitative research methods to carefully identify the subjective experiences both client and therapist have during Type II conversations and, if these subjective experiences prove sufficiently distinct (which I believe to be the case), one would have a way to monitor the presence of a NDS-related phenomenon in psychotherapy in real time. Briefly, my speculation is that Type II conversations – the type of conversations that I believe have the properties of a chaotic attractor and lead to the most productive work in therapy – have features that can be organized into four categories: these conversations demonstrate play behavior evidenced by a literary, almost poetic, quality in the verbal exchanges; both client and therapist experience a mixed cognitive state best described as a dialectic synthesis of clarity and confusion (dare I say a state of clarifusion?); the emotional tone during the interpersonal exchange is one of non-attachment in which one maintains a dispassionate but active involvement; memory takes on a time-independent quality, meaning that details of previous sessions are recalled with equal clarity whether they occurred last week or four months ago. The principle quality of a Type II conversation is that it is experienced as *vital and thematically rich*, and entails a sharing of agency between therapist and client which is best described as a cooperative dance with the lead swaying effortlessly back and forth between the participants. While a long way from verifying that Type II conversation is a valid construct corresponding to a chaotic attractor, for now this collection of features serve as a useful guideline to navigate the course of therapy and is what I teach a trainee to attend to during therapy sessions.

So, the take home messages here are that: 1) moment-to-moment conceptual and gestural exchanges during a course of therapy can, under the proper conditions, self-organize into a multi-level structured entity: a conversation, 2) conversations are hypothesized to be of three types, of which one of these – Type II conversation – has the properties of a chaotic attractor (here I use chaotic in the mathematical sense of the discourse trajectory forming a chaotic attractor in a Discussion Space) and, 3) this Type II conversation is hypothesized to be subjectively distinct from the other two and can hence be identified in real time by a properly trained psychotherapist. There is much more to be said about this: what conditions bring about Type II conversations; how a Type II conversation is often in need of *expansion* for therapy to proceed, and how one goes about inducing and guiding such an expansion; how a Type II conversation appears to have the property of abrupt state transitions; what "variables" one would use to quantify the discourse so that NDS-related properties could be detected if indeed present; what Type I and III conversations clinically correspond with and how to subjectively identify them; what the roles of awareness and free will are in this model, an especially important yet thorny question needing to be addressed if we are to ultimately understand how therapy can lead a client to securing

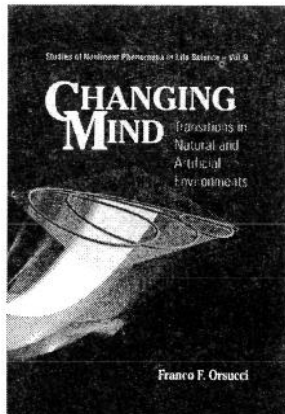
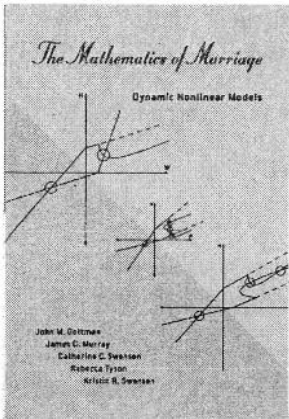
eudaimonia, what the ancient Greek philosophers called a flourishing life. But space limitations require I stop here.

My intent was to give you a sense of how I found my way to NDS theory and how I am trying to make use of it in developing a clinical conversation model to better understand and teach the practice of psychotherapy. Most importantly, NDS theory allows these concepts to be developed in a testable way and offers us the hope of an empirically-based model of clinical interaction that does justice to the complexity of human interaction. Or perhaps all of this is nothing but fanciful speculation that will be proven wrong. But that's the point – the possibility exists that it can be proven wrong rather than endlessly argued about. It is precisely this possibility that it can be falsified (in Popper's terminology) that can provide a scientific basis for such a theory. Without this, clinical theory will always remain in the realm of magic and metaphor with the victor being the best rhetorician. I expect more of clinical theory and a clinical theorist. And I would like to inspire my students to expect more as well. Acknowledgement: Special thanks to Patricia Lipscomb who read an earlier draft of this article and made several helpful comments.

Biographical Sketch: Domenic Ali, Ph.D., LCSW received his doctorate in chemistry from UC Berkeley in 1983 and his Masters in Social Work from Smith College in 1989. Over the past 13 years, he has worked as a clinical social worker with HIV-positive clients in San Francisco in a variety of clinical settings. He currently directs the UCSF AIDS Health Brief Psychotherapy Traineeship and provides clinical consultation to the San Francisco AIDS Foundation. Domenic is also a practicing psychotherapist and specializes in working with HIV-positive gay clients.

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BOSTON HIGHLIGHT #1

Anthropologist Clifford Brown To Speak At Boston Meeting

Clifford T. Brown, Ph.D., RPA, has agreed to speak at the upcoming SCTPLS meeting in Boston. Prof. Brown received his BA cum laude, from Yale, and his MA & Ph.D. from Tulane. He has been project director for many anthropological projects in the US south and in Mesoamerica, 1991 to the present, with a great deal of field, consultative, and curatorial work prior to that. He has held Fulbright and NSF grants along with several other scholarships, grants, and fellowships. He has taught at Montgomery College, Virginia Commonwealth University, Tulane, and elsewhere. His main publications date from 1993; his paper presentations from 1989. Currently he is Senior Archeologist for a government agency.

On the CHAOPSYC list server (May 16, 2002), Brown described himself: "I am an archaeologist and anthropologist with a deep interest in fractals and related topics like self-organized criticality and chaos. I have published a couple of articles on the applications of fractal analysis in archaeology. I have an article coming out shortly (when I finish the revisions) entitled "The Fractal Geometry of Ancient Mayan Settlement Patterns" in which I discuss the evidence for ancient Maya society acting like a self-organized critical system. Look for it in the Journal of Archaeological Science some time next year. As an archaeologist, I can take a relatively long-term view of society, which occasionally helps address the problems associated with short times series analysis. "I'd like to say this is the best listserv I've ever belonged to. I suspect that the presence of many psychologists improves the quality of social interaction and noticeably reduces the whining, tantrums, egotism, etc. that seems pervasive on many lists. Not to minimize the presence of some superb thinkers here...." He also stated he would like to attend a conference of ours; the Society decided to make it easy for him.

BOSTON HIGHLIGHT #2

Catherine Dibble To Present Agent-Based Computational Laboratories Workshop At Boston Meeting

This workshop is for anyone interested in agent-based research strategies. The workshop emphasizes computational laboratory modeling and science. Research thinking and interests are far more important than programming skills for this workshop. Nontechnical researchers are welcome and encouraged to attend.

After a brief historical overview of agent-based approaches and platforms, the workshop will focus on RePast (from U Chicago Social Science Research Computing, a 2nd generation clone of Swarm that has especially strong support

for social science modeling), GeoGraphs (which allow for agent simulations on network landscapes, including small-world and scale-free networks), and Genetic Algorithms (which mimic natural evolutionary processes to find adaptive solutions to highly complex problems, and which work as complements to agent-based simulations at several levels), with an emphasis on model design, experimental design, and on how agent-based computational laboratories complement other approaches to research. Application examples will illustrate the utility of this research approach in exploring topics such as the evolution of organizations, epidemiology, settlement patterns, globalization processes, the effects of social and spatial structures on the evolution of conflict and cooperation, and the evolution of inequality. Handouts will be provided, along with a web site from which to download and install computational laboratory software and related development software.

The instructor, Dr. Catherine Dibble, is an economic geographer at the University of Maryland. She has decades of experience and training in evolutionary systems and scientific method, formal economic theory and game theory, computer science, theoretical geography, and especially computational laboratories. She has been working professionally with simulation models of many types since 1980, with genetic algorithms since 1993, and with agent-based simulations since 1995. Her publications so far cover new designs for handling spatial structure and solving location-allocation problems using genetic algorithms, for representing absolute and relative space and time in genetics based machine learning, and for genetic evolution of optimal organizational designs under disparate conditions. She is the inventor of the general purpose GeoGraph library for Swarm and RePast, which supports the construction of agent-based models on richly structured network landscapes such as organizations, social institutions, and geographic landscapes. Dr. Dibble teaches advanced PhD seminars in Computational Laboratories and leads an active Computational Laboratory research group at the University of Maryland.

Data Base Resources Expanded

The SCTPLS Data Library has expanded greatly since the last announcement that appeared in the April, 2002, Newsletter. The new listings include the following.

Economic data: US Federal statistics, US Census 2000, USDA Farm income, Global population dynamics, Statistics Canada, Eurostat data shop, Australian Bureau of Statistics, Statistics Finland, Japanese Statistics Bureau, UK National Statistics, Economic time series pages, FRED – an economic time series database, and the Data Zone.

Geophysical data: Sunspot numbers, International GPS data, Biogeochemical cycles in the Sargasso Sea near Bermuda, Joint Institute for the Study of Atmospheres and Oceans, Community Climate System, and the Arctic Theme Page (great pictures too, BTW).

Psychological /Physiological data: Neuronal time series analysis workbench, Woodlawn Mental Health Longitudinal Community Epidemiological Project.

Social: National Center for Education Statistics (US), Bureau of Justice, Bureau of Transportation, Cross-National

Time-Series Data Archive, National Election Studies, Mississippi State population data.

General: 74 time series from the University of York, 800 time series files from Monash University (Melbourne, Australia), Forecasting competition from the Institute of International Forecasters, 12 data sets from Duke University, Some strange attractor data, time series data protocol project, electronic data services at Columbia University, Princeton University data library, British data search engine, and a library of data series from University of California-Davis.

The Data Library was compiled by Webmaster Kevin Dooley. Further information about the Data Library Project appears on the SCTPLS web site, Data Library menu item. Members are encouraged to prepare their findings concerning time series data and analytic techniques for the web library and NDPLS.

Structural Equations Tutorial Available on Web Site

A tutorial on Structured Equations for Testing Nonlinear Dynamics hypotheses is now available on the SCTPLS web site. It can be reached from the home page or the Tutorials menu item. The tutorial was authored by Stephen Guastello and it closely follows his tutorial presentation on the subject at the 1999 SCTPLS conference at University of California, Berkeley, and Chapter 3 of his book, *Managing Emergent Phenomena* (2002, Erlbaum).

Obituary Art Winfree

Art Winfree, 60, (1942-2002), University of Arizona Department of Ecology and Evolutionary Biology, who combined insights from the mathematics of phase singularities and such diverse fields as Biology, Chemistry, Engineering, Medicine and Physics to study the dynamics of biological rhythms, died on November 5 in Tucson, Arizona. Dr. Winfree was a pioneer in understanding the phenomenon of self-organization and attractor cycles, ring dynamics and other related phenomenon. One of his more important contributions was the first tractable mathematical model of emerging coherence developed in 1966. "In this severely simplified model, the unit oscillator progresses along a fixed cycle of successive states that eventually lead back to a prior state. The oscillator is always somewhere on the unique continuous cycle, the shape and amplitude of which cannot change." (Art Winfree, "on Emerging Coherence," *Science*, 20 December 2002, vol 298). Dr. Winfree applied these and other insights to blinking fireflies, chirping crickets, the pulsating heart, energy metabolism in cells, three-dimensional scroll waves in excitable media, excitability of cell membranes, slime mold aggregation, growth and regeneration, the flower of Kalanchoe, the circadian control of ovulation (Arthur Winfree, 1980, 2001) *The Geometry of Biological Time*. New York: Springer-Verlag.)

He examined how these various activities spontaneously become synchronized, beating in unison and then how even the most robust of these rhythms can collapse,

giving rise to chaos. As George Johnson, *NY Times*, pointed out: "He had a grand gift for bringing, in a simple manner, deep topological, geometrical and dynamical ideas into the realm of the natural." This included excellent and easy to understand diagrams in his books, and the explanation of complex experimental results. Mason Porter noted that: "In contrast to my experience with several other scientists, he was quite down to earth. It is noteworthy that he seems to have treated people new to the business as equals rather than inferiors." For many of us, including myself, his work was our first good and understandable introduction to nonlinear dynamics and how such dynamics are influenced by various rhythms, tempos and other temporally related phenomena in biological self organizing systems. -- *Gus Koehler*

Society Journal Publisher Kluwer Sold

Kluwer Academic Publishers was sold on Oct. 18, 2002, to a consortium of two venture capitalist firms, Candover and Cinvin, from the UK. The company was placed on the market April 20 by its parent organization, Wolters Kluwer, which wanted to retrench into medical texts where it had a greater marketing strength. Kluwer Academic publishes *Nonlinear Dynamics*, *Psychology*, and *Life Sciences*, and two engineering journals, *Nonlinear Science Today*, and *Journal of Nonlinear Science*.

Kluwer administrators assure us that the sale will not affect the operation and distribution of Kluwer journals. No management changes in KA personnel are expected as a result of this sale.

Springer-Verlag, another publisher of fine nonlinear dynamics and other mathematical material went up for sale in September, 2002. Industry sources speculate the venture capitalists might be likely purchasers here as well.

Grawemeyer Award Nominations Sought

The University of Louisville is pleased to announce the continuation of the Grawemeyer Award, an annual award established through the generosity of the late H. Charles Grawemeyer. The purpose of this award is to acknowledge and disseminate outstanding ideas in the science of Psychology. Criteria for determining the winning idea include originality, creativity, scientific merit, and breadth of potential impact on the field of Psychology. The Grawemeyer Award includes a cash prize of \$200,000 paid in five annual instalments of \$40,000. The first annual competition for the Grawemeyer Award in Psychology was won by Michael Posner, Marcus Raichle, and Steven Petersen, the second competition by James McClelland and David Rumelhart, and the third by Daniel Kahneman and Amos Tversky. Nominations for the Award have been submitted from all over the world, spanning all areas of the science of Psychology.

Nominations for this year's competition must be received by January 15, 2003. Letters of nomination should identify the specific idea being nominated, the author(s) of the idea, and why the idea merits the award. Please include the current mailing address, telephone and fax numbers, and

email addresses for the nominee(s). Nominations may be sent by mail to: Carolyn B. Mervis, Ph.D., Director, Psychology Grawemeyer Committee, Department of Psychological and Brain Sciences, University of Louisville, Louisville, KY 40292. Nominations may also be submitted by fax to Carolyn Mervis at (502) 852-8904 or by email to grawemeyer.psychology@louisville.edu. For more information, please contact Leisa Hillman at (502) 852-0430 or send email to grawemeyer.psychology@louisville.edu.

An SCTPLS Wedding

Yes indeed! Irina Trofimova and Bill Sulis were married on June 24, 2002 at the Royal Botanical Gardens, somewhere in Ontario Canada! For the benefit of those who joined recently, Bill was SCTPLS President for 1996-97 and 1997-98. Irina joined the Society in 1996 and started the tradition of the Russian Dolls which are transferred from President to President at the Annual Business Meeting.

Bill and Irina are noted for other important joint efforts such as the NATO tutorial conference on nonlinear dynamics in Moscow (Russia, not Idaho), in May 2000, and a similar NATO project in Hawaii in September, 2002. Their co-edited book, *Nonlinear Dynamics in the Life and Social Sciences*, which is a compendium of papers given at the 2000 conference, was published by IOS Press in 2001.

Two Things You Can Do to Help!

The Society Journal, *Nonlinear Dynamics in Psychology & Life Sciences* (NDPLS), is one of our greatest assets. As an international journal it publishes scholarly theoretical and empirical work in the areas covered by the Society's remit and is the leading journal in its field. We feel it is particularly important to promote the Journal's interests and in this regard we are making a big push to achieve two things:

(1) To get libraries not already doing so to subscribe to NDPLS, at least in the electronic version, but if possible in hard copy as well. A request to your local librarian may be all that is required to jog them into action.

(2) The second big effort is to get NDPLS included among the source reference journals used by ISI (The Institute for Scientific Information) for its SCI (Science Citation Index) and SSCI (Social Science Citation Index) services. These are the search engines of choice for locating citing material in their respective literatures and are very widely used.

It seems probable that ISI will respond to a determined effort and take this important step. We would therefore like to appeal to all members to support our effort by writing or emailing an individual appeal to ISI to ask for the inclusion of NDPLS in the SCI source journal database.

The following points could be made in your letter:

- NDPLS is the leading journal in its field.
- Papers originally appearing in NDPLS are cited with increasing frequency by journals included in SCI & SSCI sources. It would be a progressive move therefore to include the whole content of NDPLS in the source database.

- NDPLS already appears in PsycINFO, MEDLINE, and JEL/Econlit databases.

- Any other points which may occur to you.

Please address letters by FAX at 215-386-6362 or send e-mail to

journals@isinet.com. Please mention the full name of the journal, *Nonlinear Dynamics in Psychology & Life Sciences* its ISSN 1090-0578, the name and address of the editor, Stephen J Guastello PhD., Department of Psychology, Marquette University, PO Box 1881, Milwaukee Wisconsin, 53201-1881 and the journal's publisher Kluwer Academic.

Your letters will go far to help strengthen the Journal and the Society and your help is greatly appreciated.

--Dick Bird, President SCTPLS.

CONFERENCES AND OTHER ANNOUNCEMENTS

UNCERTAINTY AND SURPRISE: Questions on Working with the Unexpected and Unknowable, April 10-12, 2003, Red McCombs School of Business, The University of Texas at Austin. A Conference Co-sponsored By: Plexus Institute and The Ilya Prigogine Center for Studies in Statistical Mechanics and Complex Systems. Key note speakers include Ilya Prigogine, Peter Allen, and Karl Weick. See Plexus Institute web site <<http://www.plexusinstitute.com/index2.cfm>> for more info.

Call For Papers – **Brims 2003: 12th Conference On Behavior Representation In Modeling And Simulation.** In affiliation with the Simulation Interoperability Standards Organization and the Institute for Simulation and Training. Scottsdale, Arizona 12-15 May 2003. If you have any questions about the submission process or are unable to submit to the web site, please contact Van Lowe (vlowe@ist.ucf.edu). All Submissions Due: 17 January 2003. 6th International Conference on Computing Anticipatory Systems. To be held at HEC, LIEGE, Belgium, August 11-16, 2003. You can see the invitation to present a paper at the web page: <http://www.ulg.ac.be/mathgen/CHAOS/CASYS.html>.

CHI'03 Workshop - Humor Modeling In The Interface. Fort Lauderdale, Florida, USA, 5-10 April 2003. Deadline For Position Papers 17 January, 2003. More Information: Anton Nijholt, anijholt@cs.utwente.nl. This workshop aims to: To provide a forum to discuss the role of humor in human-computer interaction; To discuss a research agenda, including the identification of relevant (computational) humor theories and relevant applications; To identify recommendations as to how companies and research funders can combine and use the several disciplinary specialties needed to design interfaces that employ humor.

CFP: **Third International Workshop on Epigenetic Robotics: Modeling Cognitive Development in Robotic Systems**, 4-5 August 2003, Boston, USA, see more details at <http://www.d.umn.edu/~cprince/epigenetic-robotics/2003/cfp-03/cfp.html>

CFP: **Second International Symposium on Imitation in Animals and Artifacts**, 7 -11 April 2003, University of Wales, Aberystwyth, United Kingdom, as part of the Artificial Intelligence and Simulation of Behaviour

Convention AISB'03 with the general theme of "Cognition in Machines and Animals". Up-to-date information about the symposium is available at <http://homepages.feis.herts.ac.uk/~nehaniv/aisb03.html>. Submissions: Extended abstracts (3-5 pages) due 15th January 2003.

COGNITIVE SCIENCE--Joint International Conference, 13-17 July, 2003... The University of New South Wales, Sydney, Australia. For more info see: <http://www.cogsci.unsw.edu.au/>

47th Annual Conference 2003 of the International Society for the Systems Sciences (ISSS): <http://www.iss-conference.org/>. Conference Location: Iraklion, Crete, Greece. Conference Dates: July 7-11, 2003. ISAGA2003 (The 34th Annual Conference of International Simulation and Gaming Association will be held on August 25-29, 2003 at Kazusa Academia Park, Chiba, Japan .

CONSCIOUS EVOLUTION OF HUMANITY: USING SYSTEMS THINKING TO CONSTRUCT AGORAS OF THE GLOBAL VILLAGE The conference theme has been chosen to focus attention on: (a) the challenge facing humanity as it transforms from "evolutionary consciousness" to "conscious evolution," and (b) the role systems thinking must play in constructing 21st Century Agoras in the context of globalization. Conference Location: Iraklion, Crete, Greece. Conference Dates: July 7-11, 2003. Conference Committee Aleco Christakis, cwaaleco@aol.com(Co-Chair) Ken Bausch, ken@attbi.com (Co-Chair) Interactive website, www.iss-conference.org.

The Department of Economics at the University of Stellenbosch and the African Econometrics Society (AES) have the pleasure to invite scientists and all individuals interested in research and teaching in **Econometrics, Econometric Modelling and Mathematical Economic Theory** to the 8th annual conference to be held from the 1 - 4 July 2003 in Stellenbosch. DETAILS: <http://www.sun.ac.za/econ/conference/index.html>

A new academic society in complexity science has formed: **The North American Association for Computational Social and Organizational Science.** Visit their web page for more information: <http://www.dis.anl.gov/naasos>. NAASOS promotes the journal Computational and Mathematical Organizational Theory, which is published by Kluwer Academic Publishers.

A new institute in complexity science has formed: **Human System Dynamics Institute.** Visit their web page for more information: www.hsdinstitute.org. HSDI is spearheaded by SCTPLS member Glenda Eoyang.

11th Herbstakademie Announced DYNAMICAL SYSTEMS IN COGNITIVE SCIENCE, in October 2003 (October 18th - 22nd) in Ascona, Switzerland.. The meeting is the 11th in the series of Herbstakademie ("autumn academy") meetings dedicated to the topic of complex systems in psychology and related disciplines. Information on previous meetings of the Herbstakademie community is provided on this webpage: <http://www.upd.unibe.ch/research/symposien/HA11.html>. In continuation of the Gstaad Herbstakademie of March 1997 and the Ascona Herbstakademie of October 2000, the topics of the next meeting center on cognition and action. ORGANIZERS: Wolfgang Tschacher, tschacher@spk.unibe.ch and Jean-Pierre Dauwalder, Jean-Pierre.Dauwalder@ip.unil.ch.

WANTED

NEW MEMBERS – NEW MINDS

Pioneer Spirits still at large. Warning: should be considered creative and daring.

REWARD

For each new member recruited before the end of April 2003, a place in a prize draw for one FREE registration for the SCTPLS International Conference, August 2003. The draw will be held and the winner notified on or around 1 May 2003.

The captured will be granted a

VERY FAIR TRIAL

Membership in SCTPLS includes a subscription to NDPLS for year 2003.

The captured must send a request for membership, identifying the recommending member.* Membership application must be completed and paid by 30 April, 2003.

Send applications and inquiries to Mary Ann Metzger, SCTPLS, metzger@umbc.edu, fax +1(928) 752-5036.

Or use membership form available from:
www.societyforchaostheory.org

*Recommending member must also have an active membership to be eligible.

Quantitative Psychologist Wanted

MARQUETTE UNIVERSITY DEPARTMENT OF PSYCHOLOGY

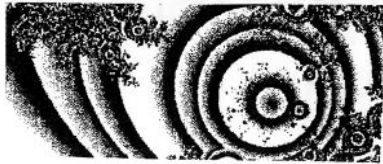
A 10-month, tenure-track position beginning August 15, 2003 as an Assistant Professor. Position is for a quantitative psychologist, who can contribute to the statistics and research methodological training in the department's undergraduate major and doctoral program in clinical psychology. Area of research specialization is open. Responsibilities include: establishing and maintaining an active and productive research program; teaching graduate and undergraduate courses in statistics and research methods; teaching in area of specialization; consulting with clinical graduate students on research methodology and statistical analysis. Requirements include: Ph.D. in psychology; teaching experience. Marquette is a private, Jesuit, Catholic university.

Deadline for application is January 15, 2003, but applications will be considered until the position is filled. Candidates should send a letter of interest, a curriculum vitae, and three letters of reference to: Search Committee, Department of Psychology, Marquette University, P.O. Box 1881, Milwaukee, WI 53201-1881. Marquette is an Equal Opportunity Employer and encourages applications from women and minorities.

WEBMASTER WANTED

SCTPLS is looking for a new Webmaster who can start as soon as possible. Webmaster will maintain updates to all the important files on www.societyforchaostheory.org and take charge of new web-based initiatives. All members are welcome to apply for this honorific position. Contact: Kevin Dooley, SCTPLS past-president, kevin.dooley@asu.edu. Please let him know where we might view some of your web creations.

Nonlinear Dynamical Bookshelf



NEW BOOKS

Boccaletti, Gluckman, Kurths, Pecora & Spano (Eds.). (2002). Experimental Chaos. Sixth Experimental Chaos Conference. AIP conference proceedings vol. 622. 503 pp. NY: American Institute of Physics. ISBN 0-7354-0071-7. "Neuroscience was the topic of several talks and papers. Emerging themes appear to be the control of neuronal activity and the construction of hybrid neuron-circuit systems, and that of using nonlinear data analysis techniques for the characterization of physiological pathologies. It was shown that these approaches can be applied to cardiac arrhythmia and detection of problems in EEG signals. Synchronization of chaos in optical systems was also presented." Interdisciplinary; parts are of use to SCTPLS members -- *Robert Gregson*

Gottman, J. M., Murray, J. D., Swanson, C. C., Tyson, R., & Swanson, K. R. (2002). The mathematics of marriage: Dynamic nonlinear models. Cambridge, MA: MIT Press. ISBN 0-262-07226-2. 403p. "Dynamic systems theory is infiltrating psychology in a variety of ways, increasing the sensitivity, realism, and scope of psychological models and methods. But I know of no other application that covers so much around, from theory-building and modeling to methodology and measurement, and finally to clinical interventions that actually work. Gottman's determination to heal marriages fuels a rigorous scientific enterprise, based on a sophisticated understanding of complex systems and the mathematics for decoding them." —*Marc D. Lewis.*

Keller, E. F. (2002). Making Sense of Life Cambridge MA: Harvard Univ. Press. ISBN 0 6740 0746 8. I want to draw attention to this book because it addresses the problem that biological systems have a different sort of complexity from physical systems, and I am of the opinion that just lifting applied maths from weather system modeling, that Lenny Smith nicely explained [on CHAOPSYC], does raise some difficulties when you come to think in terms of the nonlinear dynamics of living organisms. -- *Robert Gregson,*

Pylkkanen, P., & Vanden, T. (2002). Dimensions of Conscious Experience. Philadelphia: John Benjamins. It is by now commonly agreed that the proper study of consciousness requires a multidisciplinary approach, which focuses on the varieties and dimensions of conscious experience from different angles. This book, which is based on a workshop held at the University of Skövde, Sweden, provides a microcosm of the emerging discipline of consciousness studies and focuses on some important but neglected aspects of consciousness. The book brings together philosophy, psychology, cognitive neuroscience, linguistics,

cognitive and computer science, biology, physics, art and the new media. It contains critical studies of subjectivity vs. objectivity, nonconceptuality vs. conceptuality, language, evolutionary aspects, neural correlates, microphysical level, creativity, visual arts and dreams. It is suitable as a textbook for a third-year undergraduate or a graduate seminar on consciousness studies. — *Publisher.*

NEW JOURNALS

Mathematical Social Sciences, published by Elsevier. "I have received a pre-publication offprint from this journal by Busemeyer and Diederich, entitled 'Survey of decision field theory.' Decision field theory is a dynamic-cognitive approach to human decision making based on psychological rather than economic principles. The mathematics used is however largely linear and stochastic, and does not map succinctly into all the observed behavior. This journal appears to overlap with the interests of NDPLS readers and writers, at least those with an economics focus. I think that you can get more information from jbusemey@indiana.edu." --R. A. M. Gregson.

Chaos & Complexity Letters: An International Journal of Complex Systems Research, published by Nova Science Publishers. Chaos and Complexity Letters is a refereed journal for scientific papers dealing with every area of complex systems research. It is published both in paper and digital version (on cd and the web).

Chaos and Complexity Letters is a refereed journal for scientific papers dealing with any area of complex systems research. Relevant topics include (but are not restricted to): artificial life, cellular automata, chaos theory, complexity theory, control theory, fractals, genetic algorithms, information systems, metaphors, neural networks, nonlinear dynamics, parallel computation, synergetics. Papers dealing with applications of these topics (for example, to biology, economics, linguistics, medicine, psychology, sociology, technology etc.) are also strongly encouraged.

CCL is co-sponsored by: Academy of Architecture, University of Italian Switzerland, Mendrisio, Switzerland; Institute for Complexity Studies (ICS), Rome, Italy; Interdisciplinary Center of Complex Systems (IZKS), University of Bonn, Germany.

Editor in Chief: Franco Orsucci, MD Ph.D. All correspondence concerning the journal should be sent to: Prof. Nicoletta Sala, Accademia di Architettura, Università della Svizzera Italiana, Largo Bernasconi, CH 6850 Mendrisio, Switzerland, nsala@arch.unisi.ch.



CALL FOR PAPERS

13th Annual International Conference The Society for Chaos Theory in Psychology & Life Sciences

Boston, MA, USA
August 8-10, 2003

We invite all interested scholars to submit abstracts reporting work involving chaos theory, fractals, nonlinear dynamics, complex systems, and related topics. Along with work in all areas of psychology, recent conferences have included presentations in anthropology, art, biology, economics, education, literature, management, medical research, neuroscience,

philosophy, sociology, physics, and political science. The program will include single papers, symposia, panel discussions, a poster session, and other special sessions. Advances in basic or applied research, developments in theory, reports of empirical results, and methodological papers are all welcome.

Keynote Speaker: Clifford T. Brown, Ph.D.

Dr. Brown, a Research Fellow at the Middle American Research Institute, Tulane University, studies the social and economic organization of the Maya Culture

THIS YEAR'S SPECIAL FOCUS IS: *Big Questions, Tough Problems*

Many of us were initially attracted to the concepts and methods collectively known as nonlinear dynamics, complexity science, or chaos theory because of their promise for tackling tough problems, including "big questions" that had not yet been adequately addressed. Conventional approaches, while undeniably effective in attacking many intellectual and practical challenges, were simply not giving us adequate purchase on the questions that most interested us. For the 2003 conference, our special focus is on such "tough problems" in psychology and other life sciences.

What is the nature of consciousness? Why do civilizations collapse? How can we model interdependent systems? How might complex political conflicts be resolved? How do novel forms emerge? What is life? How can we design effective interventions for restoring, stabilizing, or healing ecosystems, the global economy, the psyche, or the brain?

We encourage submissions that address outstanding big questions or tough problems in your field of study or practice. How have nonlinear dynamics concepts or methods (including but not limited to attractors, bifurcations, catastrophe models, chaos, fractals, self-organization, genetic algorithms) enabled you to make progress in conceptualizing and studying some aspect of a tough problem or big question that has proved resistant to more standard approaches in your area?

Papers tackling issues less sweeping than the nature of consciousness or the course of war and peace are of course also welcome. At the same time we encourage you to emphasize the connection of your contribution to larger issues where possible.

Symposia that combine individual presentations with roundtable discussion, and panels that provide a range of perspectives on a single "tough problem" or a set of closely related "big questions" are especially welcome.

BRIEF OVERVIEW OF CONFERENCE SCHEDULE

August 8 (Friday)	Workshops, Registration, and Sunset Session
August 9 (Saturday)	Conference Day 2, Banquet.
August 10 (Sunday)	Conference Day 3, Business Meeting, Workshops

INSTRUCTIONS FOR SUBMISSION OF ABSTRACTS

Please submit information as shown in the sample below, giving first author with affiliation, address, phone, and e-mail, then the title of the presentation, a SHORT abstract (150–250 words for papers, up to 500 for symposia or roundtable format), followed by additional names, affiliations, and email for second, third, etc. authors (or speakers for symposia or roundtables), then your AV needs.

All abstracts **MUST** be submitted to harrow@darkwing.uoregon.edu in publishable, **electronic form**. WORD or WORDPERFECT attachments are fine, but *EVERYONE* should *also* include the abstract in ASCII form in the text of the e-mail message. This will serve as a back-up in case of problems reading the attachment.

The subject line of your email should read:

2003 Chaos Conference, SYMPOSIUM [or PAPER or POSTER or ROUNDTABLE]

Please facilitate review of your abstract by observing the following:

1. **USE** the samples below as a guide, PLEASE!
2. **DO NOT** include diagrams, graphics, or special fonts, as these cannot be printed in the program.
3. If you are using **WORD** or **WORDPERFECT**, do NOT use hard carriage returns at the end of lines in the body of the abstract. Use returns *only* at paragraph breaks.
4. **INCLUDE** affiliation, address, phone, and email for first author (main contact), and affiliation and emails for additional authors. You will be notified about the status of your submission by e-mail.
5. **PLEASE INDICATE** your audio/visual needs. Standard overhead projectors will be available, along with computer that have Powerpoint and projectors. Unusual equipment is difficult and expensive to obtain, so review your needs carefully.
6. **PLEASE avoid special formatting, extensive reference lists, etc.** ALL abstracts need to be in the form and format shown in the sample to be published on the web site and in the Conference Program.
7. **For SYMPOSIA or ROUNDTABLES**, identify ALL scheduled speakers or panelists. The abstract for these events may be longer, up to 500 words. For *symposia*, abstracts should reflect the content of EACH speaker's contribution. For *roundtables*, abstracts should provide an brief overview of the topic, and indicate the relevant background of the panelists and sample questions they will address. The format for a symposium is for all speakers to give presentations, followed by or interspersed with discussion. The format for a roundtable is an introduction to the topic and the speakers, after which the panelists address a series of questions or issues (rather than giving a series of presentations).
8. **The amount of time** allotted to single papers will depend on the number of papers scheduled, and will be announced after the schedule is finalized. Symposia and Roundtables will be scheduled for **60 or 90 minutes**, depending on the number of speakers. *Note: Our meetings have been growing in submissions. Late submissions will NOT be accepted.*
9. Each person submitting is limited to a maximum of 2 presentations (okay to be a co-author on additional submissions by others). If you submit more than 2, we will accept a maximum of 2.

SAMPLE ABSTRACT SUBMISSION for SYMPOSIUM or ROUNDTABLE

SPEAKER1: Bea I. Furcate
AFFILIATION1: Department of Nonlinearity, University of Everything
ADDRESS: City, Country, Postal Code.
PHONE: 123-456-7890
EMAIL1: bifurcate@everything.edu

TITLE: Nonlinear solutions to political conflict

ABSTRACT: In this symposium, Furcate, Al-Khayat, and Stein provide contrasting perspectives on how insights from nonlinear dynamics can generate new approaches to the current stalemate in Israeli-Palestinian relations. Furcate uses an agent-based approach that models local, regional, and non-regional actors, while Al-Khayat presents a catastrophe model that views the situation as having two stable conflict states and one unstable peace negotiation state. Stein's perspective is informed by the study of temporal patterning in negotiations that span multiple years and involve more than two parties. The major issues that all will address in the symposium are X Y and Z.

SPEAKER2
AFFILIATION2
EMAIL2

SPEAKER3
AFFILIATION3
EMAIL3 (etc. for other additional authors)

SESSION TYPE: Symposium

AUDIO VISUAL NEEDS: Whiteboard or flip chart, OHP

TIME REQUESTED: 60 minutes [90 minutes is the other option]

SAMPLE ABSTRACT SUBMISSION for PAPER or POSTER

AUTHOR1: Anna Tractor
AFFILIATION1: Department of Interesting Stuff, University of Everything
ADDRESS: City, Country, Postal Code.
PHONE: 123-456-7890
EMAIL1: atractor@everything.edu

TITLE: Applications of "chaos theory" in the study of really interesting stuff.

ABSTRACT: We report results of a two-year study of the fluctuations in several interesting variables. Of particular interest are the relation between several of the variables and several of the others. Our analysis suggests that the relation of variables may be understood as reflecting the operation of a nonlinear, complex system. Cyclic, periodic, and chaotic attractors were all identified in the data set, using a new software method for extracting attractors from time series.

AUTHOR2: Quas I. Periodic
AFFILIATION2: Department of Mathematics, University of Hard Problems
EMAIL2: qip@math.problems.edu

AUTHOR3: Cy Click
AFFILIATION3: Research Associate, World Health Organization
EMAIL3: cyclic@psych.who.org (etc. for other additional authors)

SESSION TYPE: Poster

AUDIO VISUAL NEEDS: Powerpoint

THE DEADLINE FOR SUBMISSION OF ABSTRACTS IS:

Thursday, May 1, 2003.

SUBMIT ABSTRACTS, ELECTRONICALLY, TO:

harrow@darkwing.uoregon.edu

Please Remember to send your abstract as a WORD, or WORDPERFECT formats, without special formatting and without carriage returns within the abstract, and to include a plain text version in the body of your e-mail message. Subject line of the e-mail should read 2003 Chaos Conference, SYMPOSIUM [or PAPER or POSTER or ROUNDTABLE, identifying the proposed format]

PLEASE see Instructions, and SAMPLE ABSTRACT above.

- You will be notified when your abstract is received. Responses regarding abstract *acceptance* will be made via email on or before May 19, 2003. If you are not notified by May 19, or if you have any questions, please contact Dr. Holly Arrow (President-Elect and Conference Coordinator) at above email address.
- A list of accepted Abstract Titles and Presenters should be available on the SCTPLS webpage by May 26.
- A Schedule of Presentation days and times, with Abstracts, will be posted on the SCTPLS webpage by June 16. A printed program will be distributed at the conference.
- **IMPORTANT: ALL authors of accepted abstracts are expected to complete their registration by July 10, 2003. Authors who fail to do so may be deleted from the program to reflect more accurately actual attendance and presentation.**
- REGISTRATION MATERIAL WILL BE INCLUDED IN THE NEXT (April) NEWSLETTER and will be available on the Society Webpage.
- The SCTPLS webpage is located at: <http://www.societyforchaostheory.org>

LOCATION AND ACCOMMODATIONS

The 13th annual international conference of the Society for Chaos Theory in Psychology & Life Sciences will be held at Boston University in Massachusetts (USA). Special package rates on convenient lodging facilities have been arranged. Details to be announced in the April Newsletter.

REGISTRATION FEES

The early registration fees for this conference will be US \$175 for regular members, \$140 for student members, and \$250 for non-members until July 20, 2002. After July 20, the on-site registration rates of \$200/165/275 will apply. The banquet dinner on Saturday August 9 and refreshments during the conference are included with your registration.

PUBLICATION OPPORTUNITY

All presenting conferees are further invited to prepare their papers for review and possible publication in the Society's research journal *Nonlinear Dynamics, Psychology, and Life Sciences*. NDPLS is peer-reviewed and abstracted in PsycInfo (Psychological Abstracts), Medline (Index Medicus), and JEL/Econlit. Regarding format, NDPLS uses American Psychological Association (APA) style. A concise style guide is available on the SCTPLS web site; click JOURNAL on the home page, then Instructions for Authors. All SCTPLS members receive NDPLS as a benefit of membership.

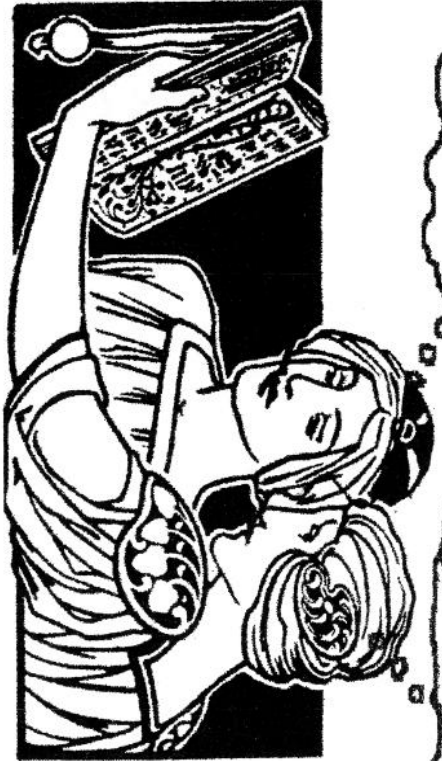
If undeliverable return to:

Society for Chaos Theory in Psychology & Life Sciences
Department of Psychology, MARQUETTE UNIVERSITY
P. O. Box 1881, Milwaukee, WI 53201-1881 USA

FIRST CLASS AIRMAIL EVERYWHERE

The SCTPLS folks
have made a LOT
of progress!

It's the Annual Conference
in Boston! The CALL FOR PAPERS



INSIDE ---
13TH ANNUAL SCTPLS BOSTON AUG. 8-10 2003
More!