



Research Committee 51 on Sociocybernetics

ISA International Sociological Association

Newsletter 22

May 2009

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1. PREFACE FROM THE EDITOR

2008 was a fruitful year for RC51 as you can read in Bernard Scott's President's letter and the report of Margarita Maas about the 2008 conference in Mexico. It is of course a pity that I, as editor was of the Newsletter, was not there because of personal circumstances. And I also have to apologise that I did not manage to publish this Newsletter earlier, perhaps because I could not have a personal talk with my RC51 friends in Mexico and persuade them to write an article for the Newsletter. Because that is one of the problems I meet when I compose the Newsletter. Authors do not spontaneously submit articles, notwithstanding the fact that with every Newsletter readers were explicitly invited to submit their articles and news. Maybe our members are, like me, too busy with their scientific activities elsewhere. But it also could be that communication rituals are changing. More and more citizens are using Internet for their exchange of information, opinions and mood of mind. We as modern members of our society do not stay behind. Announcements of conferences are directly mailed to you from our discussion list, making the announcements of conferences in the Newsletter redundant. For conferences as is greatly illustrated with the announcement of 2009 Conference by Fabio Giglietto in this Newsletter websites are playing an important role. With these websites the communication is made more and more interactive: you can submit your abstract directly in the website, deadlines are mentioned, and so on. Fabio Giglietto and colleagues took another step forward with our 2009 conference website: you can read what papers are presented, there is the facebook facility to communicate with your sociocybernetic friends, you can follow the organizers in their activities and you can 'twitter' your short messages and impressions. It could be a good model for our renewed RC51 website as is announced in the President's letter. Anyway, that is our future and I wonder whether our Newsletter will not become outdated by such a variety of information exchange.

Maybe the time has come to reflect on the possibilities and function of the Newsletter. I was supported in this reflection by our president and our past president Bernd Hornung. The result was that besides the extended letter of the president, the report of the Mexico Conference and the announcement of the 2009 conference, a new section is added to our Newsletter: book announcements and reviews. Our colleague Dimitrios Tsagdis is making us happy with the announcement of his new book about Cluster Policies in Europe. Marilena Lunca and Bernd Hornung surprise us with in-depth reviews of two books that should interest socio-cyberneticians. I will hope that other members will follow with their invitations to read books you have to know when you are serious about sociocybernetics. In this way we can give our Newsletter a new style and function.

Anyway, in 2010 with the election of a new board we have to reflect further on the Newsletter. After trying to manage the Newsletter a couple of years I am happy to leave it to our new board members and to make place for a modernized editor. The time is there for a truly Socio-Cybernetical Newsletter with instant feedback and communication possibilities on the spot of a website, or not ?!

Cor van Dijkum
Editor

2. LETTER OF THE PRESIDENT

Dear Friends,

First let me apologise that some things concerning RC51 that require my input have not yet gone forward as planned. As some of you may know, I have a health problem which affects how much time and energy I can devote to RC51 business. I have considered resigning but, on balance, I think this would be more disruptive than my staying and doing the best I can to meet the demands and responsibilities that come with the honour of being your President.

One thing that has been delayed is the production of our Newsletter, which has been awaiting this report. Another matter that is on hold is further work on our statutes, especially since the RC51 has now published further guidance on what they should contain – but more about the statutes below.

Things that have gone forward include our highly successful conference in Mexico in 2008 and the planning and organising of our Ninth International Conference, to be hosted in Italy by the University of Urbino, June 25th -30th 2009. We have also begun planning for the 2010 ISA Congress, Sweden, June-July 2010. I say more about these two events below.

Below I also report on progress in developing our new website, the ISA business meeting and Forum held in Barcelona (Sept 2009) and the activities of the Cybernetic Coalition, an informal grouping of cybernetics related societies of which RC51 is a member.

The RC51 Statutes

As you may recall a working group was set up to revise our statutes; the revised statutes were voted on and accepted by the membership at large in February 2008.

Following on from that there was communication from the ISA, to the effect that one particular statute was considered to be illegal. This statute refers to the period of time for which board members may serve. In our statutes we had said that board members could not serve more than two consecutive terms in one and the same position. Following a complaint from one of our members, the ISA advised us that this should read that Board members should not serve more than two consecutive terms, whatever the position(s) held. There are arguments for and against this. For a small society like ours, we need to ensure continuity and the availability of willing and able Board members. We also need to ensure all members are encouraged to get involved with the society's business. The current Board believed the statute in question ensured the former and that our revised election procedures ensured the latter.

More recently the ISA has put out some further guidance on what should be in all RC statutes. Interestingly, this guidance does not refer to the statute about Board members' terms of office. This is particularly curious as there are several RCs who have also adopted the offending statute or something similar. Accordingly, I have yet again written to the ISA asking for clarification. However, it still remains the case that in the light of the new ISA guidance, our statutes will have to go through some further revisions. These need to be carried out prior to the ISA congress in Gothenburg in 2010, by which time we will have begun our election procedures for the next Board. I hope to attend to this matter soon after the Urbino Conference meeting in June/July of this year.

RC51 International Conference held in Mexico 2008

The conference held in Mexico City was a great success. I take this opportunity to again thank the local organisers for the hard work they put in to ensure that the conference went off successfully. I would also like to thank other members who helped organise the conference, including the members of the abstracts committee.

Organising our conferences is very much a team effort. As well as a very interesting programme of paper presentations, participants in the conference had opportunity to engage in a number of other activities, including visiting places of interest in and around Mexico City. Following the conference some of us had the great pleasure to go on a trip together to visit Oaxaca. We spent several very pleasant days there, visiting places of historical and local interest, including learning about local industries, such as the production of carpets and of mescal. The visit to learn about the latter included some free samples, which we were happy to receive. One other very important thing which should be mentioned concerns the location of the conference. The conference took place in the Centro Histórico where our host was the museum director, Hector Moreno (husband of the Chair of the Local Organising Committee, Margarita Maass). The Museum was a truly beautiful and inspiring place in which to hold an academic conference.

I should like to mention how good it was to have with us our Honorary President, Felix Geyer, who despite his mobility problems made the great effort to journey to Mexico to attend the conference. Without Felix's hard work over the years, RC51 would not be the success it is today. Thank you, Felix, and thank you for your inspiring presence in Mexico.

Sociocybernetics Symposium at the European meeting on Cybernetics and Systems Research, Vienna, Spring 2008.

I would like to thank our Vice-President, Eva Buchinger, for organising the Sociocybernetics Symposium that took place as part of the EMCSR conference in Vienna. RC51 hosted sessions in which eight papers were presented. The sessions were well attended and provided a great opportunity to raise awareness about sociocybernetics and RC51

ISA Forum Barcelona September 2008

The ISA Forum in Barcelona grew out of the need to hold business meetings for the ISA. Chaime Marcuello and I participated in the business meeting of the Research Coordinating Committee (RCC) as representatives of RC51. The ISA took the opportunity to mount what was in fact a mini version of the ISA Congress with sessions run by different RCs. The idea was to give opportunities for RCs which do not have regular meetings to get together. RC51 itself did not host any sessions as we do have our own international conferences. However, we were, at a late stage, asked to present something from RC51 as part of what were referred to as 'common' sessions. In the event, Chaime and I presented a paper on sociocybernetics and world futures as part of a session in which other participants were RC01 and RC34. Because of the complexity of the programme, this particular session was not well attended but it was very useful way to meet officers of other RCs. This has, in due course, lead to the planning of a joint session to be held in Gothenburg in 2010 with participation from RC51, RC34 and RC10. At the meeting of the RCC, we learned about plans for the ISA Congress and we also took the opportunity of raising the issue of the statutes and the consistency across RCs particularly with reference to terms of office for board members. Chaime and I also met with Arturo Rodriguez, the President of the RCC, to raise our concerns with him personally. Arturo was most patient and obliging in listening to our concerns but the impression we received was that the ruling already made was not likely to be reversed. However, as noted above, we are surprised that the ISA has not addressed this issue in it recent guidance.

RC51 International Conference in Urbino 2009

I am delighted that the University of Urbino has agreed to host the next RC51 international conference. Particular thanks go to our member Fabio Giglietto for arranging this and for acting as Chair of the Local Organising Committee. As I write, I have received news that the abstract receive process has been completed and that more than 50 papers are likely to be presented. I here thank the abstracts committee and their chairman, Michael Pauteau, for all their hard work. We have had a very large number of paper proposals sent in and I suspect this is because of the wide interest in the theme that has been chosen, that of Modernity 2: the impact of communications media locally and globally.

ISA Congress Gothenburg June/July 2010

Plans are already underway for the ISA Congress. RC51 is expecting to run some 18 sessions. Our programme co-ordinator is Margarita Maass. (Thank you, Margarita!) We have received a number of session proposals as calls for papers. These are now available for viewing on the ISA website. The formal call for papers with key dates will be sent out later this year.

Revising the RC51 Web-Site

Work is underway to revise the RC51 website. The working group is lead by Barry Gibson. Other members are myself, Chaime Marcuello, Felix Geyer and Michal Paetau. Thus far a new look and feel has been agreed, together with a proposed navigation structure. Many of the texts need to be revised. We hope to make substantial progress before the conference in Urbino.

The Cybernetics Coalition.

You may recall that the Cybernetic Coalition (CC) consists of a number of small cybernetics related societies: RC51, the American Society for Cybernetics (ASC), the Cybernetics Society (UK), the Heinz von Foerster Society (Austria), the Dutch Systems Group and the Autopoiesis Group (Slovenia) The CC was originally convened at the suggestion of Ranulph Glanville, President of the ASC. The idea is that the smaller societies should work together to provide strength of numbers, to share information, organise joint events and so on. Thus far two main things have happened. First, an opportunity was given to all those interested in cybernetics to provide information on how they came to know about cybernetics, what their views are of what are its main ideas and so on. This information has been compiled by the ASC and I understand a report is due soon. The second event was a workshop held in Vienna in September 2008 to discuss second order cybernetics. The novelty of the occasion was that it combined being an academic seminar with an experiential workshop, in that, as well as discussing their understandings and applications of second order cybernetics, participants were asked to reflect upon the experience of being participants. Thus, the workshop itself had a second order aspect. This proved to be fascinating, valuable and interesting. It was clearly established that there is a commonality of understanding about what second order cybernetics is and what its value is in our scientific research and in our individual lives. It is hoped that there will be a follow up meeting sometime in 2009. One outcome of the workshop was an agreement that it would be very helpful if there were resources available on which to base introductory courses for students wishing to learn more about cybernetics and systems. A project, referred to as Cybernetics 101, has been initiated by Ranulph Glanville with support from Peter Tuddenham, both of the ASC. I will report further progress in due course.

Finally, I would like to thank all of you for your continued support for RC51. I think we are, indeed, a very special organisation combining research and scholarly activities with the kind of warmth and fellowship that can be rare in academic circles. I look forward meeting some of you in Urbino in due course and some of you in Gothenburg.

Best wishes

Bernard Scott
RC51 President

3. SOCIOCYBERNETICS EVENTS

3.1 A Report on the RC 51 Meeting in México

The 8th International Conference on Sociocybernetics took place in Mexico City on June 2008. We had five days with intensive reflection concerning Complex Social Systems, Interdisciplinarity and World Futures as analyzed and understood by the RC51 Sociocybernetics Group. The event started with a tribute to Dr. Rolando García Boutigue from Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades - CEIICH-, at the Universidad Nacional Autónoma de México. His contributions on theoretical, methodological and epistemological in science, makes him a landmark in the field of Epistemology in Mexico and internationally.

Participants from many countries presented 37 papers related to the conference theme: Argentina, Chile, Colombia, Spain, South Africa, China, UK, Austria, Japan, Germany and of course from México. We had more than 10 contributions, about interdisciplinary approaches to the study of social systems from a Sociocybernetics perspective. In this context, a complex social system is considered as a process in which its operation is derived from the convergence of multiple interactions in such a way that it is not decomposable into its constituent disciplinary perspectives. Therefore, no complex social system can be described by simply adding independent studies over each of its components. As Garcia says, "The non decomposability of a complex system is due to what we have called the interdefinability of its components. The research of that system is performed by a multi-disciplinary team, with a working methodology that must attain an inter-disciplinary integration" (García, Rolando, "Sistemas Complejos", 2006). It follows that the difference between a multidisciplinary and an interdisciplinary research team lies in the integration of the latter on the basis of common conceptual and methodological frameworks.

From these ideas, the conference provided a dialogical space for knowledge construction and discussion addressing epistemological, theoretical and methodological aspects of interdisciplinarity in the course of the study of complex social systems. The conference also aimed to make reflections on interdisciplinarity and debate about possible world futures by bringing together the views of sociologists, economists, technologists, ecologists, historians, political scientists, psychologists, anthropologists and other natural and social science specialists to reflect on different societal development paths and their desirability.

Around these issues, some papers were: Hector Zamorano, from the Faculty of Economics and Statistics in Rosario Argentina, presented "A way to apply interdisciplinary studies in social systems";

Daniel Strauss, from South Africa, participated with the paper "The challenge of integrating multidisciplinary perspectives on social systems and a future world."

Communication and information technologies have had a strong penetration in number activities of everyday life. On this topic, Carlos Lozano Ascencio, University Complutense, Spain, participated with the paper "The hegemonic discourse about the truth and communication: what media say about social communication." Fabio Giglietto of the Faculty of Sociology, University of Urbino, Italy, talked about "User generated content for analyzing social science: generational sense we in the Italian blogosphere."

We had some participants from Mexico interested in Sociocybernetics, presenting on various topics: Jesus Marcelo Ramirez Arias from Institute for Research in Applied Mathematics and Systems, at UNAM, talked about "The use of information technologies from a complex systems perspective". Octavio González Castillo, also of the UNAM, participated with "Conceptual Reference Systems: an interdisciplinary coordinating instrument." Felipe Lara-Rosano, the Center for Applied Sciences and Technological Development, UNAM, presented "A Cybernetic Model to prevent chaos after rural roads construction." Martha Patricia Castañeda CEIICH of UNAM read her paper "Feminism in Cyberspace: strengthening its proposals through the virtual network". Nelly Rigaud, from the Engineering faculty, participated with her paper "Towards a conceptual framework for the interdisciplinary human resources management research". Eliezer Morales also from UNAM read the paper " Worldwide future: a world plagued with slums"; Alvaro Quijano from El Colegio de Mexico, presented "A theoretical model in order to represent academic libraries as information systems."

Labcomplex, the research group at UNAM that organised the, presented several papers around a multidimensional vision of social problems in order to afford new epistemological constructions on social complex systems. Some of their papers were oriented to an epistemological approach, second order reflection and integration perspectives in order to have a better understanding of social problems taken as complex systems. Some of their topics were: "Genetic epistemology, basic mathematics and systemic thinking as essential for social research disciplines"; "Social analysis as an interdisciplinary challenge: a perspective from Sociocybernetics: a potential inflection and cybercultura"; "The building of networks emerging systemic transformation of reality"; "Cibercultura, interdisciplinarity and complex systems"; "The experience of organizing the collective work of Labcomplex"; "Genetic epistemology, interdisciplinarity and complex systems of Piaget and Garcia as the basis for Emerging Communities of Local Knowledge"; and "Cybercultura sociocybernetics and complex systems: the growing challenge between associationism and constructivism".

As has been established, we know that Sociocybernetics embraces both first order and second order cybernetics. On this line, Bernard Scott from Cranfield University, UK, talked about "The role of sociocybernetics in understanding world futures"; Michael Paetau, from Fraunhofer Institute IAIS, Sankt Augustin, Germany, spoke on "Transition of knowledge formation: complexity, difference and emancipation." Jixuan Jason Hu, WinTopo Organizational Learning Laboratory, Shanghai, China, "Cognitive Tools for Understanding and Action Strategies for Improving Organizations: A Sociocybernetic Approach in Organizational Development"; Andres Gomez Seguel, from the Universidad de Chile, participated with "Conflict as a system and its specific forms of social complexity"; Reiko Sekiguchi, from Otsuma University, Tokyo, presented "A framework to consider a social system: derived from research experience of education and learning system in Japan." Felix Geyer presented reflections about the future of sociocybernetics. Chaime Marcuello, from the Universidad de Zaragoza, talked about "Applying sociocybernetics in complex social issues: water management and water conflicts in Spain." Hernando Gutierrez Prieto from Universidad Javeriana, participated with the paper "Legal dynamics far from equilibrium." Bernd Hornung, University Hospital Giessen and Marburg, participated with a paper about "Sociocybernetics, arts, and aesthetics: an information theoretic approach". Eva Buchinger, from ARC Systems Research Tech Gate, Vienna, talked about "Governance as a macro-micro phenomenon: The role of institutions." Finally Karl-Heinz

Simon, from Kassel, Germany, talked of "On the complexity of change models: Aulinas and Banathy".

The Walter Buckley award was given to Zachary Johnson, from Cranfield University, UK, with his paper "Micro / macro decisions in university leadership and governance: Luhmann in action".

México is a big and a wonderful country. There are many places to visit and many things to do. We have arts and crafts, history, music, gastronomy, museums, and archeology sites, colonial and modern cities. Our meeting was accompanied by a series of cultural visits and social gatherings in historic spaces in Downtown Mexico City, Teotihuacan and in Oaxaca City. We believe all sociocyberneticians spent a splendid time in our country enjoying unforgettable days.

Margarita Maass

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3.2 9th Conference of Sociocybernetics

Dear friends and colleagues,

This note is just to extend you a cordial invitation to attend the 9th International Conference of Sociocybernetics. The conference will be held in Urbino, Italy from 29 June to 5 July 2009. The conference is organized in collaboration with the Department of Communication Studies of the University of Urbino "Carlo Bo".

This year, the Program Committee, chaired by RC51 President Bernard Scott, has created an especially timely program that focuses equally on Sociocybernetics and the impact of web 2.0 technologies on society. The attempt is to promote a sociocybernetic approach to Internet studies. The title of 2009 conference is 'Modernity 2.0' Emerging Social Media Technologies and their impacts.

The response to the call for papers by researchers from all over the world was overwhelming and after a double blind review process carried out by the abstract committee, chaired by Prof. Micheal Pateau, we selected 51 potential participants (<http://larica-virtual.soc.uniurb.it/rc51/papers/>) over more than 70 submissions.

The program will be finalized just after the closure of conference registration procedure (24th of May). Giuseppe O. Longo (Full professor of Information Theory at the Electronic Engineering Department of the University of Trieste) will deliver a keynote speech during the morning of first day while Danah

Boyd (Microsoft Research New England and a Fellow at the Harvard Berkman Center for Internet and Society) will deliver a second keynote speech during the morning of Thursday 2nd of July.

“Modernity 2.0” will be organized in the traditional RC51 format in order to better create group among participants, 40 minutes slots (20 minutes speech + 20 minutes discussion) and a maximum of 8 paper a day with coffee breaks every 2 or 3 papers to foster informal discussions.

The conference program also includes three extra academic events: a dinner organized on 2nd of July, a visit to “Raffaello e Urbino” painting exhibition on Saturday 4th of July evening and a mini eno-gastronomic tour of Le Marche region on Sunday 5th of July.

I can’t wait to see you all in Urbino!

Fabio Giglietto

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P.S. Up to date information on the conference is also available on the conference website: <http://larica-virtual.soc.uniurb.it/rc51/>. Short news will be delivered via the twitter channel: <http://twitter.com/modernity20>. [The Facebook event](#) hosts a discussion board you may find useful to get in touch and self-organize with other delegates before the conference.

4. BOOK ANNOUNCEMENTS AND BOOK REVIEWS

4.1 BOOK ANNOUNCEMENTS

Announcement made by Dimitrios Tsagdis



Cluster Policies in Europe: Firms, Institutions, and Governance (2008)

Susana Borrás and Dimitrios Tsagdis.
published by *Edward Elgar*

[Go to website for more information](#)

The latest research monograph by Susana Borrás and Dimitrios Tsagdis explores a key relation that has so far been neglected in the literature, viz. the relation between the learning of the (multi-level) governance system, and the learning of the governed system.

As part of this exploration the relevance of policy and institutions, knowledge sources, governance directionality, horizontal and vertical forms of coordination, adaptability, and problem solving capacity are comparatively studied; in a sample of 12 clusters from Germany, UK, Italy, Slovenia, Czech Republic, and Romania.

The study's sample of clusters covers all evolutionary stages and is evenly balanced across low-tech (footwear and clothing), medium-tech (furniture and film), and high-tech (automotive, ICT) industrial specialisations.

These are developed into case studies based on an array of secondary data as well as extensive primary data; collected through face-to-face interviews with some 500 firm and institutional representatives across Europe.

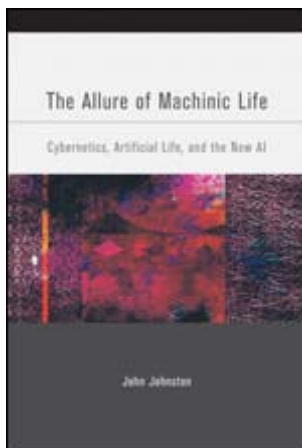
The above underwrite the book's precise and concrete recommendations for local, regional, national, and European policy makers on the basis of a solid empirical evidence and rigorous analysis.

Although systems and cybernetic principles underpin much of this interdisciplinary study, it is jargon-free so to appeal to a wider policy, economics, and business readership. It should thus be of interest to Sociocyberneticians working in such areas as it provides an unparalleled insight into the empirical complexities and dynamics of multi-level governance and learning of large scale socio-economic and technological systems in Europe.

4.2 BOOK REVIEWS

4.2.1 The Allure of Machinic Life. Cybernetics, Artificial Life, and the New AI.

Review by Marilena Lunca



The Allure of Machinic Life. Cybernetics, Artificial Life, and the New AI. (2008)

John Johnston

Published by *Bradford Book, MIT Press*

[Go to website for more information](#)

This is one of those books that are cited and referred to many years after its publication; a book to which scientifically minded people return to after its first reading. And here are the reasons therefore.

The subtitle indicates the main domains that the author brings together in a framework of “forms of nascent life that have been made to emerge in and through technical interactions in human-constructed environments” (p. 1, emphasis added). As known, cybernetics, artificial life (ALife), and artificial intelligence (AI) are each as vast as to be incomprehensible in one book. The author managed to do just that and to give due consideration to far wider ramifications in philosophy, cognitive sciences, neuroscience, robotics, and computation.

The first part – From Cybernetics to Machinic Philosophy – is equally instructive for students and for professional researchers. The former learn the best achievements of forerunners such as Ashby, von Foerster, Walter, or von Neumann; the latter learn that their influence on thinkers such as Lacan, Chomsky, Prigogine has been not only profound but enduring too. The latest developments in AI and ALife bear the stance envisioned by the forerunners, namely that humans’ extensions into machines exceed the mere technological significance – these bring a new kind of thinking, of conceiving of science as an intellectual and transformative enterprise. As socio-cyberneticians, we appreciate and draw on the epistemic side of cybernetics: the value of feedbacks, feedforwards, second-order observers, and the almost circular relationships between humans and technology that brought irreversible changes to the social relatedness among humans. Yet, Johnston invites the reader to rethink the very idea of ‘machine’ as a nomologic and nomothetic generator of forms of existence that evolve and are creative in the standard (not the ultimate) sense of the word. As a result, the ‘mechanical’ side of cybernetics appears far richer than probably most of us have considered. It is the “machinic”, according to Johnston, that enabled the co-evolution of cybernetics and information theories, which contributed to the birth of AI as a branch of computer science and now is deeply involved in the rapid building up of ALife and the newly oriented AI – discussed in the second and third parts of the book.

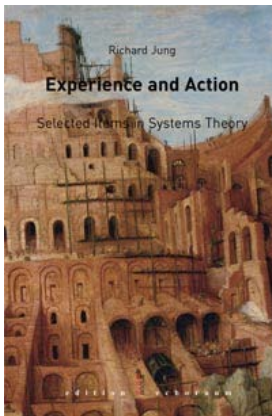
The relevance for sociocybernetics of the two chapters of part II can be summarised by the keywords autopoiesis and complexity, more precisely, by the relations between autopoiesis and self-organisation that engendered new forms of emerging complexity. The disciplines of the social find new grounds (and new imperatives!) for seeking actively orders of integration with disciplines of the “human-constructed environments” that are almost indistinguishably physical, biological, and mechanical. Genetic algorithms, to give just one example, can no longer be ignored by social scientists that are looking for socially and subjectively sensitive methods of investigation. If anything, Johnston’s book argues and exemplifies the erosion of the old irreconcilable dichotomies of object–subject, objective–constructive, deterministic–chaotic, automaticity–learning, and many others of the kind. Although there is a clear inclination of the author toward emphasising the power of the computational reasoning, the fact that this is now part and parcel of reasoning across the board (from the most empirically

sociological worries to the social and political dimensions of human condition) is what makes this book to stand out.

The last part – Machinic Intelligence – engages in a number of debates that torment many scientific communities and are unlikely to die out any time soon. The most gauge of these – the machinic activities of the intellect that give rise to the question of whether machines may be ‘intelligent’ – is firstly well presented in its historical perspective, and secondly, well framed so as to understand why the two main human activities – the thinking and the behaving – constitute now the two main challenges of the latest generation of AI. The fact that neuroscience and cognitive science(s) come with somewhat conflicting and parallel evidences for what is about to become the science of consciousness is explained by the largely parallel developments of the sciences of ‘behaviour’ and those dealing separately with the psychological and logical components of ‘thinking’. Machines that behave (robots) and adapt to various environments by means of sensory-and-thinking components appear to teach humans a lesson, namely, that the ‘truths’ that all the scientific communities are looking for are not to be found in the elusive neutral-value but rather by seeking confirmation in as many disciplines as possible. Many of the open problems in semantics, psychology, theories of knowledge, theories of communication (not just transmission of information), proof theory, indeterministic physics, societal networking, and so on, cannot be solved from within isolated disciplines or without taking into account what the machinic intelligence has done or can do about those problems. This is the overarching idea the author wants to convey, and he does it convincingly. However, the bright future of the transformational role of machines in humans’ ways of thinking, communicating, and behaving may have been presented slightly imbalanced. The physical symbol theory of Newell and Simon, for instance, is furthered to hold for the second generation AI rather than reviewed in light of pertinent critiques argued by Hofstadter and others. According to them, we became rather dependent on these machines, but not entirely and possibly not essentially. It is we, the humans, after all who create those counterparts of us, and although both the swimmer and the ship cross the water, they do it quite differently. In as far as the creative thinking is concerned, this is the modus of being of humans – of scientists and artists – who have in machinic intelligence a competitive partner. There is no risk of being overrun by machines provided scientists and artists do not become as lazy as to delegate their work to software. The less knowledgeable reader may be seduced by the richness of the framework built by the author in order to obviate the deep-running relations among minds, machines, and nature, hence this concluding remark of mine. The knowledgeable social scientists and cyberneticians will find in this book many reasons to work toward advancing sociocybernetics as an integrative, transdisciplinary scientific instrument, and to integrate amongst themselves.

While reading this book, I couldn't get rid of a paradox: we invented machines to give ourselves more time to do what no other living species does better – to think. And yet, instead of using the time so gained as intended, we, or most of us, find new ways of competing rather than cooperating. Instead of remaining confident that it is inside ourselves where the cooperative frame of mind resides, we find a new enemy in machines.

4.2.2 Experience and Action, Selected Items in Systems Theory *Review by Bernd Hornung*



Experience and Action, Selected Items in Systems Theory (2007)

Richard Jung
Published by *Edition Echoraum*

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1. Summary

The book presents the essence of Richard Jung's thinking about how to conceptualize man and the world he lives in from a systems point of view, looking at the individual as a bio-psycho-socio-cultural being. It is a summary of a long life of international and interdisciplinary research, teaching, and writing, which strongly draws on the heritage of European and classical philosophy.

2. Target Groups

The book is an inspiring and challenging reading for anybody interested in fundamental issues of systems and cybernetics or systems-oriented social sciences, like e.g. sociocybernetics, who already has a background in these fields and, ideally, in philosophy. It cannot be recommended to the curious novice, but it is a treasure for the experienced researcher exploring the limits and foundations of these fields.

3. Contents - Overview

In 13 chapters, divided into two parts of the book, the author presents his effort to develop an integrated and comprehensive universal conceptual and formal systems framework for the behavioral and social sciences, concentrating on action and experience. With his approach Richard Jung wants to overcome the traditional split between the natural sciences and the humanist sciences, the latter including the social sciences, and to present a unified theory of action in the context of a postmodern general system theory.

The main focus, in terms of behavioral and social sciences, is psychology and social psychology, i.e. the psychological system – or the mind, as Jung prefers to call it – embedded in a social context. At the level of systems and cybernetics he focuses on action and experience and on the development of systems in general and psychological systems in a social context in particular. A recurrent central theme throughout the book is, in line with the ambitious aim of developing a unified postmodern

systems theory, the split between natural and social sciences and the author's proposal to overcome this split by a constructivist and perspectivist phenomenological approach.

With this intention the first part of the book is mainly devoted to presenting the philosophical, in particular ontological and epistemological, views and foundations of Jung's approach to action and experience and to elaborating in this framework a number of key issues and key concepts. What is a system? What is the role of typologies? Levels and boundaries; communication and control in time and space; First and Second Order Cybernetics; Postmodern Systems Theory; etc. are such key issues. The core of this first part of the book is the chapter dealing with metaphors for the hermeneutics of life. One of them, the metaphor of mind, is developed in further detail in the second part.

In the second part of the book the author presents his systems theory of action and experience, which is a theory of intentionality. It includes three subsystems and sub-theories, i.e. theories of motivation, decision, and orientation. Orientation refers to the entire cognitive system, not just too normative, ethical or moral orientation.

The book concludes with a short statement on work in progress. This puts the detailed discussion of particular issues back into the overall context of the author's encompassing intellectual endeavour of developing a unified and ontologically monist theory.

4. Contents – The Chapters

In an enthusiastic foreword Ranulph Glanville stresses Richard Jung's broad background of knowledge and his depth of thinking about key issues of systems theory, which culminates in a comprehensive formulation of general system theory to be presented in this book. In an introductory chapter the author himself outlines this ambitious program, based on the idea of continuity between the realms of inanimate and animate beings, although the focus is, after all, on the organism as a psychological and social being.

Richard Jung also sketches the main traits of his dualist epistemology, which leads to the principle of (perspectivist) double description, and to a monist ontology. The latter is based on the idea of indefiniteness, out of which form, and in further steps the world, emerge. A number of other key concepts and principles are explained as well as the difference between things, as concrete entities, and systems, as conceptual (mental) entities.

This wide background sets the scene for an analysis of development and of how to conceptualize development in a systems theoretical framework (Part I, Chapter 1). Here Jung provides a number of valuable distinctions leading to different types and stages of development and to types of education. Education is the example illustrating his theoretical considerations.

This line of argument drops suddenly and surprisingly from the large vision of philosophy of science and general system theory to quite a different level in Chapter 2. This chapter deals with detailed problems of explanation strategies of psychologists and methodological details of an empirical study, a highly specific topic. Its relevance becomes visible only much later on. The chapter ends with an argument in favor of (non-arbitrary) typologies, which are needed, e.g., to classify types of change, types of development, etc.

The previous considerations about development and classifications are not resumed anymore in the rest of the book, with the exception of an only brief reference in Chapter 8.

Chapter 3 turns to the central theme of the book, action and experience. These terms are used with a rather broad meaning. The chapter provides the basic terminology and definitions to be used in the following theoretical discussions. The latter begin in Chapter 4 with four metaphors taken from the history of science and philosophy. They give a basic structure to Jung's entire building of systems theory. The idea is to develop these metaphors, which give rise to different systems of discourse

(different perspectives), into formal theories. The metaphors are machine, organism, mind, and template, whereby the latter covers more or less what is otherwise called culture. Discussing in the next chapters experience, action, and communication, Jung focuses in particular on the mind, and to a lesser extent on template and organism. Chapter 5 deals with communication, a term used by the author in a very broad sense. According to Jung, communication equals control. He discusses in some detail social control and fundamental mechanisms and techniques of social control. The chapter concludes with an outline of Richard Jung's concept of self, the core of experience and action. In his view the self is an "itinerant self", volatile, unstable, and not to be localized after all.

Chapter 6 switches to a different topic. First and Second Order Cybernetics are discussed under the double perspective of mind/organism or subject/object. This double perspective is proposed by the author as a consequence of his ontological monism and epistemological dualism. In the last chapter of this first part of the book Richard Jung proposes on six pages highly condensed foundations for "Postmodern Systems Theory".

Part II presents an outline of the author's systems theory of action and experience. For lack of space this is more a description than an argument.

In the first chapter of the Part II, Chapter 8, the Richard Jung provides a conceptualization of the psycho-social system which is strongly inspired by the work of Parsons and Shils. Jung extends and adapts their theories to his own theoretical approach. This conceptual scheme is then used to discuss the issue of (psychological) change and development of the individual and to arrive at a classification of different types of change in such a system.

Chapter 9 returns to ontology. It discusses the nature of man which can be seen in four different ways: classically either as a fact of nature or as a special entity of the cosmos, more recently also as an artifact or as a focus of meaning. For Jung, the term "meaning" is practically synonymous with "information". So far the basic split between the world of energy (and explanation) and the world of meaning (and understanding or "Verstehen") remains intact. After a discussion of the problems of explanation and understanding the author suggests as his own solution to combine the four metaphors as jointly providing the program of the life sciences. The latter he concretizes in the following by proposing his Unified Theory of Action, based on what he calls phenomenological systems analysis.

This theory implies as a basic principle that only constraints are to be used as explanations, no goals or purposefulness whatsoever. A second basic principle, on which Richard Jung insists repeatedly along the book, is the use of functional analysis. This means, that in the face of constraints (independent variables) a set of intervening variables (a subsystem or mechanism) stabilizes an essential variable (dependent variable).

The Unified Theory of Action has as its own essential variable inauthenticity (of an actor, a group or a collectivity) which is to be kept at a minimum by the action system. The action system in its turn is composed of three subsystems, orientation, decision, and motivation which have their own respective essential variables. For all three subsystems sub-theories are presented.

The next chapter, 10, is a reprint from the Festschrift for Felix Geyer ^[1]. It recapitulates issues from the previous discussions with a somewhat stronger focus on experience. The author conceives the mind as a system, i.e. a set of variables and a set of relations. It is a system of intentions, whereby intentions are characterized by the (epistemological) duality of experience and action. According to the author's ontological monism, experience and action can be seen both as subjective and as objective phenomena, depending on the perspective used. In a similar way a system of intentions can be seen as a system of experiences (input side) or a system of action (output side).

In both perspectives a system of intentions is composed of the three subsystems motivation, decision, and orientation. These are elaborated in Chapters 11, 12, and 13 respectively.

Motivation is discussed as stress and deformation of the surface of a system, which may or may not proliferate internally. The theory of decisions provides links to (micro-) sociology and social psychology and identifies different types of decision processes, decision-makers, and different types of systems of orientation. What is called here system of orientation corresponds roughly to what otherwise might be called cognitive system in a rather broad sense which includes values. According to Jung this subsystem produces a (cognitive) world out of indefiniteness by using different sets of operators in different steps of operations. From this process twelve different systems of discourse may result, which in their turn may give rise to different systems of judgement, if certain sets of operators produce the corresponding transformations.

The book concludes with a brief outlook on work in progress. This concerns systems and significance and aims at overcoming the gap between the naturalist and the humanist study of man. In an annex finally, a large set of tables documents and summarizes the overall body of theory presented in the book.

5. Observations

The book is a collection of papers written over many years, not a monograph. This necessarily leads to ruptures and gaps in the presentation of a highly complex and sophisticated system of thought and does not always permit the systematic and coherent argument to be expected from such an ambitious project. It also results in a certain redundancy, as independently written articles necessarily imply repetition of certain fundamental statements and suppositions. This redundancy, however, helps to better understand the very complex subject matter and the specific terminology of the author.

More bothersome to the attentive reader, who would like to follow-up on the literature quoted, is that not all literature from the individual chapters is listed in the bibliography at the end of the book. Also that bibliography does not go beyond the 1970ies. Inclusion of some of the more current relevant literature would certainly be desirable. The work draws heavily on a few of the classics, the giants on the shoulders of whom we stand: Freud and C.G. Jung for psychology, Parsons for sociology. In particular for Jung's perspectivist monist arguments, that meaning/information and matter/energy are two sides of the same coin, e.g. the trilogy by Tom Stonier, who considers information as "the internal structure of the universe" would be a very substantial enrichment and support ^[ii]. Also the theory of distinctions of George Spencer-Brown^[iii] might very well complement and enhance Richard Jung's theory about indefiniteness.

The use of, all historically-empirically derived, metaphors and the request for their formalization is doubtlessly inspiring and heuristically valuable and helpful. However, it raises the question, whether such an approach is adequate for a philosophical foundation of a systems theory which is intended to serve all of the life sciences.

The presentation of the vast theoretical body is highly condensed in the description of numerous categories, classifications, and their combinations. This is certainly very useful to provide a view of the overall structure of the author's thinking. More explanatory argument, however, would be desirable to convince the reader to accept these ideas, instead of referring him to other publications of the author.

It would be desirable, e.g., to get more explanation about how the concept of development, the discussion of which is very useful and inspiring for those who deal with this issue, is related to the neighbouring concepts of change (social change) and evolution.

Also the statement that only constraints are to be used as explanations, no goals or purposefulness ^[iv], would deserve more argument and elaboration. After all this view is very surprising for an author who is otherwise very close to psychological thinking, where objectives, goals, and values (not to be confounded with a metaphysical teleology!) usually play a very important role. A consistent argument

along the line of ontological monism and the perspectivism involved in pluralist epistemology might lead to a different conclusion, if based strictly on the metaphor of mind.

Quite thought provoking, especially in the age of the Internet, is the second part of Chapter 5 dealing with (social) communication and control related to the phenomena of space and time and of being in time. These ideas might be highly interesting and important for organization and management science or also media science.

6. Relevance of the Book and Conclusion

The book is valuable reading for anybody interested in systems and cybernetics who does not want to see bits and pieces only. In spite of some weaknesses it provides a wide view of Richard Jung's systems theory, ranging from its philosophical foundations to theoretical frameworks applicable for research in the social sciences. Evidently this large body of theory could not be fully elaborated and argued within the limited size of this book.

In addition to its usefulness as a theoretical framework for research (especially Part II and the tables in the annex), and maybe even more important, the discussion of a wide range of fundamental problems of systems theory in particular and the life sciences in general along with Richard Jung's proposals for solutions make it an intellectually stimulating and thought provoking book, which can help to find new and creative answers to some old and difficult questions.

ⁱ⁾ **SCOTT**, Bernard; **MISHEVA**, Vessela; **VAN DIJKUM**, Cor (Guest Editors): Festschrift for Felix Geyer, Kybernetes, The International Journal of Systems & Cybernetics, vol. 35, no. 3/4, pp. 323-346 2006.

ⁱⁱ⁾ **STONIER**, Tom: Information and the Internal Structure of the Universe, An Exploration into Information Physics, Springer-Verlag, Berlin, Heidelberg, New York, Tokyo 1990; **STONIER**, Tom: Beyond Information, The Natural History of Intelligence, Springer-Verlag, Berlin, Heidelberg, New York, Tokyo 1992; **STONIER**, Tom: Information and Meaning, An Evolutionary Perspective, Springer-Verlag, Berlin, Heidelberg, New York, Tokyo 1997.

ⁱⁱⁱ⁾ **SPENCER-BROWN**, George: Laws of Form, 1st Edition, Allen and Unwin Ltd, London 1969; on related issues in this context also e.g. **HORNUNG**, Bernd R.: Science, Technology, and Innovation in Society, in: **AGUADO**, Juan Miguel; **SCOTT**, Bernard; **BUCHINGER**, Eva (eds.): Technology and Social Complexity, pp. 25-62, Editum - Ediciones de la Universidad de Murcia, Murcia, Spain 2009.

^{iv)} A systems theory of values and orientation was developed by **BOSSEL**, Hartmut: Earth at a Crossroads, Paths to a Sustainable Future, Cambridge University Press, Cambridge 1998; **BOSSEL**, Hartmut: Ecosystems and Society, Implications for Sustainable Development, in: World Futures, vol. 47, pp. 143-213, OPA - Overseas Publishers Association, Amsterdam 1996; **BOSSEL**, Hartmut: Indicators for Sustainable Development: Theory, Method, Applications, A Report to the Balaton Group, IISD - International Institute for Sustainable Development, Winnipeg, Canada 1999.