emcsr

2012

european meetings on cybernetics
and systems research

1 Our Patron: Rectorate of the University of Vienna

Susanne Weigelin-Schwiedrzik:

- first deputy of the Rector, University of Vienna

- Vice-Rector for Research and Career Development

- Professor of Sinology, Department for East Asian Studies

2 Our Honorary Chair: Robert Trappl

- Professor Emeritus, Center for Brain Research, Medical University of Vienna

- President, Austrian Society for Cybernetic Studies

- Chair, EMCSR 1972-2010

3 Networking

3.1…why?

3.2…who?

3.3…how?

3.1 …why?

Helga Nowotny, President, ERC (Prof. emerita, Social Studies of Science, ETH Zürich)

- 2005: paradigm change throughout the sciences: frontier research based upon the concept of self-organisation; no need for granting systems research per se
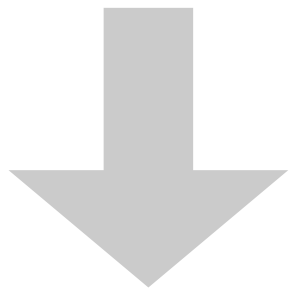
- 2012: usefulness of useless knowledge

Kevin Warwick, Prof., Cybernetics, University of Reading

- 2009: cyborg experiments – why not?

BUT:
crises multiply –
there is a mismatch between what we could do and what needs to be done!

3.1 …why?

- to enhance the self-reflection of the field

- (in order) to provide science with methods, findings and ends
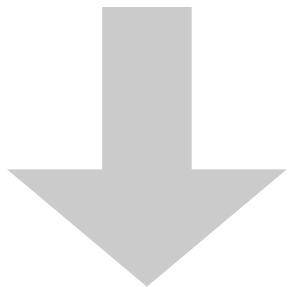
- (in order) to help alleviate the global challenges

3.1 …why?

Self-reflection of the field

- What has a particular approach in common with other approaches? And what makes it distinct from those?

- How far can we go and accept a common base such that our approach can be based upon it?

3.1 …why?

Self-reflection of the field

	practice	image of the world	research methodology
problem encountered	irreproducibility	irreversibility (process), irreducibility (structure)	unpredictability (ex ante), no retrodictability (ex post)
puzzle	controllability	determinacy	explainability
task	strategy in complexity	conception of complexity	thinking in complexity

3.1 …why?

3.1.1 Task: Strategy in Complexity

3.1.2 Task: Conception of Complexity

3.1.3 Task: Thinking in Complexity

involve, among others, questions like the following:

3.1.1 Task: Strategy in Complexity

- Observer: do only social systems necessitate the inclusion of the observer? Or does this hold for any system – artificial (see: MERRELYN EMERY) and natural?

- The whole: is the whole of interconnected systems out of human reach? Or can information (technology) reduce the frictions in the functioning of, and inbetween, those systems (see: ÉRVIN LÁSZLÓ)?

- Unity-through-Diversity: is unity-through-diversity only descriptive of a systems architecture? Or is it normative too?

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3.1.2 Task: Conception of Complexity

- Emergence: is novelty a mere matter of our imagination? Or is it a feature to be ascribed to real-world systems as well?

- Downward causation: do Agent Based Modeling, networks analysis (see: PÉTER ÉRDI) and modularity suffice to describe self-organisation? Or does a natural system exert downward causation from the structure to its elements wich makes a nested hierarchy different?

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3.1.3 Task: Thinking in Complexity

- Formalism: do formalisms provide the only scientific way of explaining the world? Or can narratives (qualitative methods) contribute to understanding?

- Pancomputationalism: can we simulate natural systems because the world is a big computer? Or do present-day computers represent a restricted kind of natural dynamics only?

- Knowledge transfer between disciplines: can we learn from, e.g., biology? Or does biology rather exhibit general systemic features that might be detected in social systems as well (see: PÉTER CSERMELY, EDGAR MORIN)?

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3.2 …who?

Individual level

- about 160 submissions
  about 150 presentations
  out of which about 40 invited
  presentations
  out of which 5 keynotes

- 30 % female

- 20 students

- from:
  – Europe (Austria, Belgium, Denmark, Germany, Finland, France, Greece, Hungary, Latvia, the Netherlands, Norway, Portugal, Russia, Slovenia, Spain, Switzerland, UK, Ukraine)
  – Asia (Georgia, India, Japan)
  – Africa (South Africa)
  – Australia
  – Americas (Brazil, Columbia, Mexico, USA)

3.2 …who?

Local institutional level

- Patron: University of Vienna

- Organisational support by affiliates of public universities:
  – Alpen-Adria Universität Klagenfurt
  – Johannes Kepler University Linz
  – Medical University of Vienna
  – University of Graz
  – University of Salzburg
  – Vienna University of Technology
  and research institutions outside public universities

3.2 …who?

Systems movement levels

- National societies:
  – Austrian Society for Cybernetic Studies (OSGK)
  – Hellenic Society for Systemic Studies (HSSS)
  – Sociedad Española de Sistemas Generales (SESGE)
  – Ukrainian Synergetic Society (USS)

- Regional societies:
  – Union Européenne de Systémique (UES)

3.2 …who?

Systems movement levels (continued)

- International societies:
  – Bertalanffy Center for the Study of Systems Science (BCSSS)
  – Giordano Bruno GlobalShift University (GBGU)
  – The International Academy for Systems and Cybernetic Sciences (IASCYS)
  – International Federation for Systems Research (IFSR)
  – International Society for the Systems Sciences (ISSS)
  – World Organisation of Systems and Cybernetics (WOSC)

3.3 …how?

- self-organisation

- 19 Symposia
  1 PhD Day

3.3 …how?

- PhD day: encouraging young academics

	10.					11.					12.					13.	
	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula
9-10.30	plenum					keynote csermely					keynote emery					keynote laszlo	
11-12.30	keynote erdi					a	p	phd	i	o	q	m	d	k	g	plenum	
14-15.30	a	b	phd	p	e	n	s	u	i	o	q	t	c	k	g		ifsr
16-17.30	a	b	phd	p	e	n	s	b	l	f	q	t	c	k	j		ifsr
18-19.30	a	b	phd	p	e	n	s		l	f	iascys	t	c	k	j		ifsr
20-21.30	keynote morin					n	s		l	f	dinner						ifsr

3.3 …how?

- Reception of the new Academicians by The International Academy for Systems and Cybernetic Sciences: honouring distinguished experts

	10.					11.					12.					13.	
	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula
9-10.30	plenum					keynote csermely					keynote emery					keynote laszlo	
11-12.30	keynote erdi						a	p	phd	i	o	q	m	d	k	g	plenum
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16-17.30	a	b	phd	p	e	n	s	b	l	f	q	t	c	k	j		ifsr
18-19.30	a	b	phd	p	e	n	s		l	f	iascys	t	c	k	j		ifsr
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3.3 …how?

- Reflective meeting of systems movement societies (hosted by the IFSR): strengthening co-operation

	10.					11.					12.					13.	
	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula
9-10.30	plenum					keynote csermely					keynote emery					keynote laszlo	
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20-21.30	keynote morin					n	s		l	f	dinner						ifsr

3.3 …how?

3-steps-procedure:

from (1) the general to (2) the specific to (3) the general

	10.					11.					12.					13.	
	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula	kapelle	1	2	b	aula
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4 Our Conference Manager: Stefan Blachfellner

- B original Business & Communication Design, Salzburg