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WELCOME

Dear I2S News subscribers,

Welcome to the May/June I2S News. As always, we have found a wonderful smorgasbord of resources to share. Fingers crossed that our new website will be live by the time of the next News.

Gabriele Bammer and Peter Deane

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FEATURED TOOL

Scenario Method for Integrating Knowledge

Braito, M., Penker, M., Görgl, P., Gruber, E., Wytrzens, H. K. (2013). Scenario Method for Integrating Knowledge on Demographic Development in Peripheral Regions of Austria to 2030 (PDF 1.7MB), digital poster #645 from the First Global Conference on Research Integration and Implementation held in Canberra, Australia, online and at three co-conferences (Lueneburg in Germany, The Hague in the Netherlands and Montevideo in Uruguay) 8-11 September, 2013. (Online: http://i2sconference.digitalposter.com.au/posters-list/645 (viewed May 2014).)

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Five primary steps in the scenario process are charted: (1) defining project boundaries (2) determining the driving forces (3) analysing the driving forces (4) generating scenarios and (5) scenario transfer to allow visualisation of scenario outputs as a story. The first four steps involved scientific experts, public administrators, and regional planners and managers. The fifth step involved all those in the previous steps minus the scientific experts.

The scenario method was applied to the demographic challenges facing the Ostregion in Austria and enabled:

- integration of knowledge from previous studies as well as the "implicit" knowledge of regional experts
- mutual learning between scientists from different disciplines and practitioners from different regions and professional affiliations
- identification of governance strategies plus visualising them for public decision making
- incomplete and uncertain knowledge to be dealt with.

The authors also concluded that the integration of qualitative and quantitative approaches was very insightful, as well as being a challenge with required "a lot of trust, openness and flexibility among all participants involved".

For more methods, such as

• Team Science Toolkit

See: http://i2s.anu.edu.au/resources/tools

FEATURED VIDEO

An Introduction to Systems Thinking: Integration and Implementation in the Face of Wicked Problems by Gerald Midgley

This is a webcast from the 1st Global Conference on Research Integration and Implementation, held in Canberra, Australia, online and at three co-conferences (Lueneburg in Germany, The Hague in the Netherlands and Montevideo in Uruguay) 8-11 September, 2013.

 Access to this video can be obtained via the website of the First Global Conference on Research Integration and Implementation: http://www.i2sconference.org/ (click the purple ON-DEMAND VIDEO button on the right menu - a simple sign-up is required to view the video material).

This talk provides an introduction to systems thinking for people with little prior knowledge of the field. It is useful to identify four key systems thinking skills:

- 1. Exploring boundaries understanding the inclusion, exclusion and marginalisation of stakeholders and the issues that concern them.
- 2. Appreciating multiple perspectives how and why stakeholders frame issues in different ways.
- 3. Understanding relationships networks of interconnections within and across systems.
- 4. Thinking in terms of systems themselves organised wholes with properties that cannot be anticipated by analysing any one part of the system in isolation.

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Different theories, concepts, methodologies and methods help with the practical application of these systems thinking skills. Selected examples are described and illustrated with brief case studies from action research projects undertaken in the UK and New Zealand. The four selected examples are: the theory of Boundary Critique for exploring boundaries; Soft Systems Methodology for appreciating multiple perspectives; System Dynamics modelling for understanding relationships; and the Viable System Model for thinking about governance and organisation in whole system terms.

The case studies from practice demonstrate that systems approaches provide valuable ways forward for dealing with intransigent problems characterised by:

- Complex and uncertain interactions, with consequences that cannot easily be predicted;
- Multiple goals (e.g., economic, social and environmental) in tension with one another;
- Multiple scales (e.g., local, regional, national and global);
- Multiple agencies, organisations, groups and communities involved or affected;
- Multiple perspectives on defining both the problem and potential solutions;
- Conflict, power relations and vested interests making change difficult; and/or
- Scepticism due to unintended consequences from previous attempted solutions.

Nevertheless, no one methodology or method can respond equally well to all of these complexities, and there is considerable room for the further development of systems theory, concepts, methodologies, methods and practical applications.

WHAT'S FEATURED ON THE LINKEDIN GROUP

Elizabeth Bui draws our attention to the Australian Centre for Ecological Analysis and Synthesis (http://www.aceas.org.au/) and the International Synthesis Consortium (http://synthesis-consortium.org/). "Synthesis centres foster collaborative research by bringing interdisciplinary groups of specialists and experts together for an extended period of time in a collegial setting aimed at stimulating creative thinking, catalysing insight, and facilitating group learning. The centres generally provide the technological expertise to help researchers collect, analyse, and synthesise diverse and disparate datasets to address critical science questions."

Linda Urban provides access to an article about interdisciplinary research in Germany focused on clean energy.

FEATURED JOURNAL

International Journal of Decision Support System Technology

"Decision Making Support Systems (DMSS) are information systems that interactively support the decision making process of individuals and groups in life, public, and private organizations, and other entities." "The primary objective of the International Journal of Decision Support System Technology (IJDSST) is to provide comprehensive coverage of DMSS technology issues. The issues can involve, among other things, new hardware and software for DMSS, new models to deliver decision making support, dialog management between the user and system, data and model base management within the system, output display and presentation, DMSS operations, and DMSS technology management. Since the technology's purpose is to improve decision making, the

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articles are expected to link DMSS technology to improvements in the process and outcomes of the decision making process. This link can be established theoretically, mathematically, or empirically in a systematic and scientific manner". The journal was established in 2009.

• Website: http://www.igi-global.com/journal/international-journal-decision-support-system/1120 (viewed: May 2014).

• Impact factor: Nil

Call for Papers for the European Journal of Operational Research Special Issue on Behavioural Operational Research

"Within the Operation Research (OR) field, there is an increasing interest in studying behavioural factors affecting model-based problem solving and decision making processes. Recently, the term Behavioural Operational Research (BOR) has been proposed to capture this new development and signal the emergence of an important field of future activity within OR... Defined broadly, BOR relates to the behavioural aspects of the use of OR in problem solving and decision support... This Special Issue will ... present a representative collection of high quality BOR studies designed to advance our understanding of how behavioural factors affect the conduct of, and interaction with, model-based processes that support problem solving and decision making."

The journal is seeking papers on model building, model-based interaction, modelling people behaviour, communication with and about models, neurophysiological studies, cognitive biases, evaluation studies, non-expert use of OR approaches and models, teaching of OR, and ethics and OR. The journal is interested in "behavioural studies that focus on the use of quantitative and qualitative model-based processes that are typical of OR practice. We are also interested in studies that draw from a variety of different theoretical perspectives, such as psychology, economics, sociology, communication, and theories of practice. In terms of methodology, we welcome submissions in which a variety of research strategies and methods for collecting and analysing data are used."

- Special issue details:
 - o http://www.journals.elsevier.com/european-journal-of-operational-research/call-for-papers/call-for-papers-behavioural-or/ (viewed: May 2014)
- Journal homepage:
 - o http://www.journals.elsevier.com/european-journal-of-operational-research/ (viewed: May 2014)
- Important dates:
 - o Deadline for submission: 31 May, 2014

For more journals, such as

- International Journal of Knowledge, Culture and Change Management
- Sustainability Science

See: http://i2s.anu.edu.au/resources/journals

FEATURED PROFESSIONAL ASSOCIATION

International Association for Conflict Management

"The International Association for Conflict Management (IACM) was founded to encourage scholars and practitioners to develop and disseminate theory, research, and experience that is useful for

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understanding and improving conflict management in family, organizational, societal, and international settings". IACM has a focus on: interdisciplinary theory and research; global practice and education; and being an engaging and mentoring focused community. It is a "...membership-based organization of practitioners and university faculty and doctoral students from around the world. Activities include an annual conference, publication of the Negotiations and Conflict Management Research (NCMR) journal, as well as the Signal newsletter".

• Website: http://iacm-conflict.org/ (viewed: May 2014).

For more professional associations & networks, such as

• International Society for the Systems Sciences

See: http://i2s.anu.edu.au/resources/associations_networks

FEATURED CONFERENCES

36th Annual Meeting of the Association for Interdisciplinary Studies: Interdisciplinary Public Problems, the Global Community, and Diversity

The 2014 AIS conference is focused around the "...growing consensus that public problems - problems affecting multiple groups and populations across cultures in a diverse, global community - require insights and tools from a variety of disciplines, perspectives, and practices. As scholars and teachers, we are members of both local and global communities with a mandate to explore the roots and potential solutions to public problems and to educate a generation that is capable of addressing them. To do this, we must interrogate, integrate, and expand existing knowledge by creating collaborative relationships among disciplines in the arts, humanities, and sciences and by adopting integrative modes of research, education, and learning, communication, and policymaking". Areas of interest to the conference include:

- "Social, political, or environmental issues that represent a "wicked problem" for scholars, scientists, policy-makers
- Models of interdisciplinary partnerships...
- The impact of diversity in undergraduate students' learning environments...
- The role of experiential learning in undergraduate education...
- Pathways into interdisciplinary problem solving on the undergraduate level
- The ethics and politics of global or local interdisciplinary research
- Role of the media (including social media) in shaping interdisciplinary public problems in the global community
- Models and strategies to integrate the arts and/or humanities and the social and/or national sciences"

The conference will be held in East Lansing, Michigan, United States of America over 16-19 October 2014.

For further details, please see:

- Conference website: http://lbc.msu.edu/aisconference2014/ (viewed: May 2014)
- Call for papers: http://www.units.miamioh.edu/aisorg/Conference/2014CFP.shtml (viewed: May 2014)
- Important dates:
 - o July 31, 2014: submissions deadline

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2014 Action Learning and Acton Research Association (ALARA) Australasian Conference

The ALARA Australasian conference will offer two events within one week, with the focus being to "...explicitly discuss, explore and experience the power of methodology in working with two significant issues of our times":

- Self-determination and Action Research and Action Learning (8-9 November 2014)
- Responding to structural change and Action Research and Action Learning (11-12 November 2014)

The conference will be held at Lake George, outside Canberra, Australia.

For further details, please see:

- ALARA website: http://www.alarassociation.org/ (viewed: May 2014)
- Conference announcement: http://www.alarassociation.org/pages/events/alara-2014-australasian-conference-announcement (viewed: May 2014)

Other Upcoming Conferences

Conferences which have not been listed in previous newsletters are marked [NEW].

Interdisciplinarity, Transdisciplinarity and Action Research Methodologies

- [NEW] 8-13 June 2014, The Academy of Transdisciplinary Learning and Advanced Studies (ATLAS): Transdisciplinary-Transnational-Transcultural (T3) Conference on Design, Process and Systems, Taichung County, Taiwan (http://www.theatlas.org/index.php?option=com_content&view=article&id=166&Itemid=1 15)
- [NEW] 30 June 2014, Swiss Conference on Inter and Transdisciplinarity (ITD14), Zion, Switzerland (http://www.transdisciplinarity.ch/e/Network/national.php#ITD14)
- 15-17 July 2014, Transfusion and Transformation: the Creative Potential of Interdisciplinary Knowledge Exchange, Durham, United Kingdom, (https://www.dur.ac.uk/ias/2014conference/)
- [NEW] 15-19 October 2014, Association for Interdisciplinary Studies (AIS) Conference: Interdisciplinary Public Problems, the Global Community, and Diversity, East Lansing, United States of America (http://lbc.msu.edu/aisconference2014/)
- [NEW] 8-12 November 2014, Action Learning, Action Research Association (ALARA)
 Australasian Conference, Lake George, Australia
 (http://www.alarassociation.org/pages/events/alara-2014-australasian-conference-announcement)
- 27-29 November 2014, From Interdisciplinarity to Transdisciplinarity: Rethinking Research Today in Social Sciences and the Humanities, Paris, France (http://www.eaas.eu/conferences/other-conferences/from-interdisciplinarity-to-transdisciplinarity-rethinking-research-today-in-social-sciences-and-the-humanities)

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Systems, Modelling and Simulation

- 27-30 May 2014, 28th European Conference on Modelling and Simulation (ECMS 2014), Cancun, Mexico (http://www.scs-europe.net/conf/ecms2014/index.html)
- 27-30 May 2014, Conference of the American Society for Cybernetics: Living in Change, Washington D.C., United States of America (http://asc-cybernetics.org/2014/)
- 7-10 June 2014, 7th Chaotic Modeling and Simulation International Conference, Lisbon, Portugal (http://www.cmsim.org/chaos2014.html)
- 9-13 June 2014, 9th Annual Systems of Systems Engineering Conference: The Sociotechnical Perspective, Adelaide, Australia (http://sosengineering.org/2014/)
- 23-25 June 2014, Nostradamus 2014: International Conference on Prediction, Modeling and Analysis of Complex Systems, Ostrava, Czech Republic (http://nostradamusconference.org/Home.html)
- 30 June 3 July 2014, International Council on Systems Engineering (INCOSE) International Symposium, Las Vegas, United States of America (http://www.incose.org/symp2014/)
- 7-11 July 2014, 22nd Conference on User Modeling, Adaptation and Personalization, Aalborg, Denmark (http://www.um.org/umap2014/)
- [NEW] 14-18 July 2014, International Society for Bayesian Analysis World Meeting (ISBA), Cancun, Mexico (http://isba2014.eventos.cimat.mx/)
- 20-24 July 2014, 32nd International Conference of the System Dynamics Society: Good Governance in a Complex World, Delft, The Netherlands (http://conference.systemdynamics.org/)
- 27 July-1 August 2014, 58th Meeting of the International Society for the Systems Sciences: Learning Across Boundaries: Exploring the Variety of Systemic Theory and Practice, New York, United States of America (http://isss.org/world/isss-2014-announcement)
- [NEW] 30 July 2014, 7th Complex Systems Modelling and Simulation Workshop (CoSMoS 2014), Sao Paulo, Brazil (http://www.cosmos-research.org/cosmos2014.html) [NEW] 1-3 September 2014, 4th International Conference on Computer Modelling and
- Simulation, Brno, Czech Republic (http://cssim.org/)
- 1-5 September 2014, 10th Conference of the European Social Simulation Association, Barcelona, Spain (http://www.essa2014.org/)
- [NEW] 9-11 September 2014, Operational Research (OR) 56 Annual Conference, Egham, UK (http://www.theorsociety.com/Pages/Conferences/OR56/OR56.aspx)
- [NEW] 22-26 September 2014, European Conference on Complex Systems (ECCS'14), Lucca, Italy (http://www.eccs14.eu/index.php?lang=en)
- [NEW] 22-24 October 2014, 28th European Simulation and Modelling Conference (ESM'2014), Porto, Portugal (http://www.eurosis.org/cms/?g=node/2852)
- [NEW] 4-7 November 2014, 5th World Congress on Social Simulation (WCSS 2014), Sao Paulo, Brazil (http://www.wcss2014.pcs.usp.br/)
- [NEW] 12-14 November 2014, Complex Systems Design and Management (CSD&M), Paris, France (http://www.csdm2014.csdm.fr/)
- [NEW] 13-15 November 2014, Systems Thinking in Action Conference, Washington DC, United States of America (http://conference.stiatemenos.com/stia2014washington-dc/)
- [NEW] 7-10 December 2014, Winter Simulation Conference: Exploring Big Data Through Simulation, Savannah, United States of America (http://wintersim.org/2014/)

Team Science and Project Management

4-7 July 2014, International Association for Conflict Management 2014 Conference, Leiden, The Netherlands (http://www.iacm-conflict.org/)

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- 17-19 July 2014, 9th Annual INGRoup Conference, Raleigh, United States of America (http://www.ingroup.net/conference.html)
- 27-29 July 2014, Project Management Institute (PMI) Research and Education Conference: Standing on the Shoulders of Giants - In Search of Theory and Evidence, Portland, United States of America (http://www.pmi.org/Knowledge-Center/Academic-Research/research-conference.aspx)
- 6-8 August 2014, Joint 5th Annual International Science of Team Science (SciTS)
 Conference and 5th Annual VIVO Conference, Austin, United States of America
 (http://www.scienceofteamscience.org/)
- [NEW] 23-25 October 2014, European Association of Work and Organizational Psychology (EAWOP) Small Group Meeting: Dynamics of Team Cognition and Team Adaptation, Lisbon, Portugal (http://eawop.org/news/eawop-small-group-meeting-on-dynamics-of-team-cognition-and-team-adaptation

Uncertainty, Risk and Decision Making

- [NEW] 7-9 June 2014, 2nd Integrated Research on Disaster Risk Conference: Integrated Disaster Risk Science: A Tool for Sustainability, Beijing, China (http://www.irdrinternational.org/conference-2014/)
- 16-18 June 2014, 23rd Annual Conference of the Society for Risk Analysis Europe: Analysis and Governance of Risks Beyond Boundaries, Istanbul, Turkey (http://www.sraeurope.org/home.aspx?pag=1252)
- 13-19 July 2014, Thematic Group on Sociology of Risk and Uncertainty (TG04) at the XVIII International Sociological Association (ISA) World Congress of Sociology: Facing an Unequal World Challenges for Global Sociology, Yokohama, Japan (http://www.isa-sociology.org/congress2014/tg/tg.php?n=TG04)
- 15-19 July 2014, 15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, Montpellier, France (http://www.ipmu2014.univ-montp2.fr/)
- [NEW] 26-27 August 2014, Society for Risk Analysis Australia and New Zealand (SRA-ANZ): Risk Beyond the Numbers, Palmerston North, New Zealand (http://www.acera.unimelb.edu.au/sra/news.html)
- 7-10 December 2014, Society for Risk Analysis 2014 Annual Meeting, Denver, United States of America (http://www.sra.org/events/sra-2014-annual-meeting)
- [NEW] 19-23 July <u>2015</u>, World Congress on Risk: Risk Analysis for Sustainable Innovation, Singapore (http://www.sra.org/worldcongress2015)

Bridging the Gap from Research to Policy and Practice

- [NEW] 9-10 June 2014, Canadian Knowledge Mobilization Forum, Saskatoon, Canada (http://www.ckf14.org/call-for-content)
- 17-18 September 2014, 2nd Biennial Australian Implementation Conference: Solving Complex Implementation Problems, Sydney, Australia (http://www.ausimplementationconference.net.au/)

Other (including Sustainability Science)

- 8-13 June 2014, 20th International Symposium on Society and Resource Management (ISSRM): Challenges of Urban and Rural Transformation, Hannover, Germany (http://www.issrm2014.iasnr.org/)
- 11-13 June 2014, 9th International Conference on Interdisciplinary Social Sciences, Vancouver, Canada (http://thesocialsciences.com/the-conference/call-for-papers)

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- [NEW] 15-19 June 2014, 19th International Conference on Transformative Research in Science and Engineering, Business and Social Innovation, Kuching, Malaysia (http://www.swinburne.edu.my/sdps2014/)
- 18-20 June 2014, 20th Annual International Sustainable Development Research Conference (ISDRC20): Just Transitions, Trondheim, Norway (http://isdrs.org/2014-norway/)
- 26-28 June 2014, The 3rd International Conference on Transdisciplinary Imaging at the Intersections of Art, Science and Culture: Cloud and Molecular Aesthetics, Istanbul, Turkey (http://blogs.unsw.edu.au/tiic/)
- 11-13 July 2014, World Future 2014: What If, Orlando, United States of America (http://www.wfs.org/worldfuture-2014-what-if)
- 16-20 July 2014, Society for Values in Higher Education (SVHE) 2014 Conference: Minding the Gap - Educating for Economic Justice, Minneapolis-St Paul, United States of America (http://www.svhe.org/calendar.html)
- 18-21 July 2014, International Association for Critical Realism (IACR) Conference: From the Anatomy of Global Crisis to the Ontology of Human Flourishing, London, United Kingdom (http://www.ioe.ac.uk/research/91143.html)
- [NEW] 21-23 July 2014, International Conference of Engaged Scholars and Practitioners, Wagga Wagga, Australia (http://engagementaustralia.org.au/conference/)
- 4-5 August 2014, 14th International Conference on Knowledge, Culture, and Change in Organizations, Oxford, United Kingdom (http://ontheorganization.com/the-conference/callfor-papers/2014-call-for-papers)
- [NEW] 20-23 August 2014, Society for Social Studies of Science (4S) and Sociedad Latinoamericana de Estudios Sociales de la Ciencia y la Tecnología (ESOCITE) Joint Conference, Buenos Aires, Argentina (http://www.4sonline.org/meeting)
- [NEW] 27-29 August 2014, 5th International Conference on Sustainability Transitions: Impact and institutions, Utrecht, the Netherlands (http://www.uu.nl/faculty/geosciences/EN/IST2014/Pages/default.aspx)
 [NEW] 8-12 September 2014, 7th Annual Ecosystem Services Partnership (ESP) Conference,
- San Jose, Costa Rica (http://www.espconference.org/ESP_Conference)
- 9-12 October 2014, 28th Annual Conference for the Society for Literature, Science and the Arts: Fluid, Dallas, Texas (http://litsciarts.org/slsa14/)
- [NEW] 10-11 October 2014, 6th International Conference on Science in Society: The Identities of Science, Vancouver, Canada (http://science-society.com/the-conference)
- 22-25 October 2014, XX International Conference of the Society for Human Ecology: Ecological Responsibility and Human Imagination - Saving the Past~Shaping the Future, Bar Harbor, United States of America (http://www.sustainability.sk/aim-topics/)
- [NEW] 25-29 October 2014, Environment Institute of Australia and New Zealand EIANZ) Annual Conference 2014, Hobart, Australia (http://www.eianz.org/conference/eianz-3013conference)
- 31 October 4 November 2014, 77th Association for Information Science and Technology (ASIS&T) Annual Meeting: Connecting Collections, Cultures and Communities, Seattle, United States of America (http://www.asis.org/asist2014/)
- [NEW] 10-12 November 2014, Association for Qualitative Research (AQR) with Discourse, Power, Resistance (DPR) Collaborative International Conference - Fugitive Knowledges / Practices, Toowoomba, Australia (http://agr.org.au/conference-2014/)
- [NEW] 3-5 December 2014, Australian and New Zealand Academy of Management (ANZAM) Conference: Reshaping Management for Impact, Sydney Australia (http://www.anzam.org/events/anzam-2014-conference-uts-sydney/)

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• [NEW] 23-24 February 2015, 11th International Conference on Technology, Knowledge, and Society: Big Data and the Politics of Participation in a Digital Age, Berkeley, United States of America (http://techandsoc.com/the-conference/call-for-papers)

ABOUT 12S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about resources for researchers interested in Integration and Implementation Sciences (I2S), which underpins the investigation and tackling of complex real world problems, by:

- Synthesizing knowledge from different disciplines and stakeholders,
- Understanding and managing diverse unknowns, and
- Providing integrated research support for policy and practice change.

In general, each issue features concepts, methods and case studies relevant to I2S - either a useful compilation or a single example of note. We also provide information about journals, professional associations & networks, courses and conferences where researchers can learn from others, report their methodological findings and interact with like-minded peers. The newsletter also reports on discussions in the LinkedIn group "Global Network for Research Integration and Implementation": http://www.linkedin.com/groups/Global-Network-Research-Integration-Implementation-4888295.

12S News is archived at: http://i2s.anu.edu.au/i2s-publications/newsletters/i2s-news.

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