i2S News

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Australian National University

WELCOME

Welcome to the (slightly late) May/June i2S News! This is our bi-monthly notification of new additions and updates to the resources on the i2S website (https://i2s.anu.edu.au/resources). It also provides a list of the latest blog posts on the Integration and Implementation Insights blog (http://i2insights.org).

We're pleased to report that the i2Insights blog now has more than 1,000 followers and that the median number of views received by blog posts is more than 500. You can see more blog statistics at: https://i2insights.org/site-statistics/.

There are two new professional networks of note. First, the ITD Alliance brings together professional associations, networks, communities of practice and individuals involved in inter- and trans- disciplinary research and education. The Alliance will be launched at the September 2019 International Transdisciplinarity Conference in Gothenburg, Sweden. We'll report developments in future issues of i2S News.

Second, is the formation of a new network of leaders in interdisciplinary and transdisciplinary research organisations in the Oceania region, as part of a larger global network. This network of leaders aims to foster interdisciplinary and transdisciplinary research and education within and across organisations, to inspire and support researchers in achieving transformational impact on global challenges, and to represent interdisciplinarity and transdisciplinarity in research policy and funding settings. To find out more see http://nitro-oceania.net.

Gabriele Bammer and Peter Deane

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FEATURED TOOLS

Dialogue: Principled negotiation

Purpose: To provide a way of effectively integrating different interests by finding a mutually agreeable fair solution through a problem-solving approach.

Description: Principled negotiation has four steps:
1. separate the people from the problem
2. focus on interests, not positions
3. generate a variety of possibilities before deciding what to do
4. look for a fair solution, based on the merits.

Principled negotiation, also known as negotiation on the merits or 'getting to yes', can be used in a variety of situations, including in research on complex societal and environmental problems.

Separate the people from the problem

Three 'people' factors—emotion, perception and communication—need to be managed separately from the negotiation on the substantive issue. The dialogue process needs to separately deal with emotions, such as anger, enthusiasm and sympathy, to ensure they do not get in the way of dealing with the problem. For example, enthusiasm and optimism can blind people to signals from others that they have concerns, sympathy can lead people to excuse bad behaviour, and liking can lead partners to overlook significant weaknesses. The aim of principled negotiation is to channel emotions into a productive vision of working side by side to bridge differences.

No two people perceive the world or any particular problem in exactly the same way. In principled negotiation the aim is to encourage understanding of the points of view of the other research partners in order to avoid misinterpreting their intentions. Understanding is not the same as agreeing.

Communication founders when people do not listen, do not hear, misunderstand, or misinterpret. Listening actively, which involves checking that the listener is hearing and interpreting correctly, is a key ingredient for improved communication. Speakers can also pay more attention to what they say, particularly to think about what they want to get across and how this can best be achieved. It also helps if both sides are tolerant and slow to take offence.

Focus on interests, not positions

The position a person takes on a problem usually results from the combination of a number of interests. In essence, a position is a 'summary statement' and usually reflects only one way of meeting all the underlying interests. Within the range of interests that make up opposing positions, some are likely to be shared and compatible, while others are likely to continue to be in conflict. The process of identifying interests therefore usually clarifies where real disagreements lie, and, because some interests will be shared or complementary, the areas for conflict will generally be smaller than first thought. It is essential for all sides to listen with respect, show courtesy, and emphasise concern to meet the basic needs of the other parties. In addition, each partner must be specific about their interests and their importance. The aim is to be able to frame a joint attack on the differences in interests.

Generate a variety of possibilities before deciding what to do
The aim is to be creative in generating a variety of potential solutions to the conflicting interests that have been identified. There are four primary barriers to be avoided:
1. Premature judgment, in other words leaping to a solution before considering the options.
2. Searching for a single answer. This results from an assumption that there is only one "right" answer, rather than an appreciation that there are generally many ways in which interests can be met.
3. Assuming the problem is embedded in a set of rigid constraints. Lateral thinking is encouraged, including identifying additional resources that can be brought to bear.
4. Thinking that one or more involved parties have no role in solving the problem. Instead, seeing areas of conflict as shared problems requiring shared solutions is more likely to lead to mutually satisfactory outcomes.

Look for a fair solution, based on the merits
Once options have been generated, the next step is to evaluate them and to find a fair solution, based on objective criteria. Different criteria will be useful in different situations and can include moral standards, equal treatment, scientific judgment, efficiency, cost, or what a court would decide.

Finding a fair solution is also helped when each partner has worked out their BATNA (Best Alternative to Negotiated Agreement). This requires each partner to work out the best outcome they could achieve without the negotiation. In conditions where a perfect solution for each partner cannot be reached (which will be most negotiations), the aim is for everyone to be better off than their BATNA.

Conclusion
Although principled negotiation was originally developed to resolve conflicts, it can also be used to deal with the normal differences inherent in research on complex problems. Principled negotiation is appropriate to finding a fair solution that best accommodates the various interests in the problem itself (for example, among stakeholders who want different outcomes from the research, such as protection of fisheries versus protection of tourism). It is also useful for finding a fair solution among the different interests driving involvement in the research (for example, authorship order on publications, or who gets to speak publicly on behalf of the project). Using a trained facilitator to steer the process may be helpful

Source: Principled negotiation was originally developed by Roger Fisher and William Ury at the Program on Negotiation at Harvard Law School, in Cambridge, Massachusetts, United States of America.

- **Reference**:
  - o Fisher, R., Ury, W. and Patton, B. (1991). *Getting to yes. Negotiating an agreement without giving in*. 2nd ed. Random House Business Books: London, United Kingdom.

Collaboration = harnessing and managing difference (updated tool)

Purpose: To improve research collaborations by providing an understanding of the importance of two kinds of differences among partners, as well as providing ways of dealing with those differences.

Description: The point of a research collaboration is to harness the different expertise and attributes of various partners in order to develop a comprehensive understanding of the problem and to support action to reduce the problem. Helpful aspects of expertise may include different knowledge about the problem and different methods skills, while helpful attributes may include the ability to play different roles in a team, such as being a good co-ordinator or project finisher. These are the differences that are the reason for working together.

But collaborators do not just come with desirable differences to be harnessed. Some differences – for example in values, personality, or perspectives on the problem – can cause unproductive conflict and get in the way of collaboration. They must be managed for the research to proceed.

Whether a difference is useful or problematic depends on the particulars of the collaboration and the problem being addressed. For example, in some collaborations radically different perspectives about the problem and its causes can be an important difference to be harnessed in order to obtain a more comprehensive understanding of the problem and ability to act on it. In another collaboration such a difference may be incidental to the task in hand and instead provide a source of friction that needs to be managed so that it does not derail the partnership.

Harnessing differences
Methods for harnessing differences include:
- dialogue to develop a shared understanding
- building something together – this can be a model of the problem or a product to tackle it.

Managing differences
The aim is not necessarily to eliminate disagreements and the competition they often encompass, as these can provide a vital stimulus to creativity. Instead, the aim is to minimise the tensions and disputes that prevent people from working together constructively. Useful strategies include:
- fostering reciprocity, based on the precept that partners treat each other as they wish to be treated. This provides a general foundation for satisfactory working relationships based on trust and respect. Reciprocity also requires rewards resulting from the research collaboration to be allocated in proportion to the contributions made by different research partners.
- building on a broad sweep of knowledge about conflict resolution and building trust. This includes:
  - understanding differences in personality types, cultural norms, mental models, emotional intelligence, team role skills and so on, that – by explaining why differences exist – may result in conflict melting away
  - using specific tools, such as principled negotiation to find a fair solution to accommodate differences in interests.

What's needed
Providing a systematic way of thinking about the role of differences in research collaborations highlights useful areas for further development in identifying useful and problematic differences, along with methods for harnessing those that are useful for the collaboration and managing those with the potential to get in the way of successfully working together.

- **References**:
  - Bammer, G. (2008). Enhancing research collaboration: Three key management challenges. *Research Policy*, **37**: 875-887.

    o   Bammer, G. (2013). *Disciplining Interdisciplinarity: Integration and Implementation Sciences for Researching Complex Real-World Problems*. ANU Press: Canberra, Australia. http://dx.doi.org/10.22459/DI.01.2013

Additional tools can be found at: http://i2s.anu.edu.au/resources/tools

LATEST i2INSIGHTS BLOG POSTS

The i2Insights blog (http://i2insights.org) has recently published the following posts:

Agent-based modelling for knowledge synthesis and decision support
by Jen Badham
https://i2insights.org/2019/06/25/agent-based-modelling-uses/

Funding transformative research: 10 key stages
by Flurina Schneider
https://i2insights.org/2019/06/18/funding-transformative-research/

What makes government policy successful?
by Jo Luetjens, Michael Mintrom and Paul 't Hart
https://i2insights.org/2019/06/11/successful-government-policy/

Managing uncertainty in decision making: What can we learn from economics?
by Siobhan Bourke and Emily Lancsar
https://i2insights.org/2019/06/04/economics-lessons-for-managing-uncertainty/

Collaboration: From groan zone to growth zone
by Carrie Kappel
https://i2insights.org/2019/05/28/collaboration-groan-zone/

Linking collective impact to the characteristics of open living systems
by Lewis Atkinson
https://i2insights.org/2019/05/21/collective-impact-and-open-living-systems/

Improving the i2Insights blog: Your ideas are welcome!
by Gabriele Bammer and Peter Deane
https://i2insights.org/2019/05/14/welcome-your-ideas-to-improve-blog/

Ten things to know about how to influence policy with research
by Helen Tilley, Louise Shaxson, John Young and Louise Ball
https://i2insights.org/2019/05/07/research-influencing-policy/

What every interdisciplinarian should know about p values
by Alice Richardson
https://i2insights.org/2019/04/30/replacing-p-values/

Adaptive social learning for systemic leadership
by Catherine Hobbs
https://i2insights.org/2019/04/23/systemic-leadership/

Building a research impact culture
by Louise Shaxson
https://i2insights.org/2019/04/16/research-impact-culture/

FEATURED JOURNAL

Knowledge Management Research and Practice

Knowledge Management Research and Practice covers all aspects of managing knowledge from individual to professional and organisational to national. The knowledge management field covers four overlapping areas:
- "Managing knowledge (creating/acquiring, sharing, retaining, storing, using, updating, retiring)
- Organisational learning
- Intellectual capital
- Knowledge economics."

Within (and across) these, knowledge management addresses "issues relating to technology, people, culture and systems."

The journal's cross-disciplinary focus aims to address "important tensions in the field of knowledge management, such as those between:"
- "codification" and "collaboration" schools of thought
- North American and Japanese approaches
- "Strategy and operations
- People and technology
- Short-term and long-term needs
- The organisation and the individual."

The journal covers "both theoretical and practical aspects, and especially the relationship between the two." It emphasises "the mixing of "hard" (*eg.*, technological) and "soft" (*eg.*, cultural or motivational) issues."

This is a journal of the *Operational Research (OR) Society*.

- **Website**:
  - https://www.tandfonline.com/toc/tkmr20/current

Additional journals can be found at: http://i2s.anu.edu.au/resources/journals

FEATURED NETWORK

Progressive Connexions

Progressive Connexions is "a not-for-profit network inspiring inclusive interdisciplinary research, publishing and collaboration."

A key activity is building "a range of sustainable global interdisciplinary research projects" on the topics of:

- Cultures and Societies
- Evil
- Food and Drink
- Gender and Sexualities
- Global Transformations
- Health and Illness
- Human Rights
- Making Sense Of
- Music and…
- Narratives, Persons, Communities
- Spirituality and…
- Storytelling

A series of projects is developed under each topic with the aim of "creating an interdisciplinary ethos which establishes spaces of equality within which people can meet, talk and engage in a spirit of openness and transparency." Projects start with an initial meeting and aim to "enable the further development of collaborative international networking and reciprocal ventures." The projects also provide the basis of a book series with Emerald Publishing.

Progressive Connexions is also building other activities including around accreditation and "innovative interdisciplinary practices for academic, commercial, NGO, practitioner and voluntary sector contexts."

Membership: Membership in *Progressive Connexions* comes about through involvement in activities, such as projects, in that "participants begin to develop lasting significant professional and personal relationships and to collaborate towards generating real, durable change in their respective fields of activity and in society as a whole."

Progressive Connexions was formed in 2017, as a successor to the now-defunct *Inter-Disciplinary.Net* which was founded in 1999.

- Website: http://www.progressiveconnexions.net/

Additional professional associations and networks can be found at:
http://i2s.anu.edu.au/resources/associations_networks

FEATURED CONFERENCE

3rd Annual Systems Modelling Conference (SMC): Advancing Capabilities of System Thinking and Modelling through Decision Analytics

The University of New South Wales (Canberra) Capability Systems Centre will run this one day conference on the use of a whole-systems approach to "manage complex problems in socio-technical and socio-ecological systems."

The "theme of SMC 2019 is dedicated to frontier approaches and applications of advanced system thinking and modelling capabilities via decision analytics. Decision analytics can be described as a

process characterized by descriptive, predictive, and prescriptive model building using heterogeneous (usually big) data sources. These models empower organisations to make faster, improved, and more intelligent decisions to create business value. It is an emerging field as a consequence of the huge volume of data generated by new technologies and concepts such as Internet of Things (IoT), Cyber-physical System (CPS), Industry 4.0 and wide applications of social media." "This theme has an interdisciplinary perspective which cuts across a number of scientific fields with several application domains, such as energy, water, biodiversity, logistics, manufacturing, and defence."

"This event provides a platform for researchers and practitioners to communicate about scientific and practical aspects of real-world problems, receive feedback, and share learning lessons."

The conference will be held in Canberra, Australian Capital Territory, Australia, on 12 September 2019.

- For further details see:
    - https://www.unsw.adfa.edu.au/conferences/systems-modelling-conference-2019/home

Additional conference information can be found at:
http://i2s.anu.edu.au/resources/conferences

ABOUT i2S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about new resources added to the Integration and Implementation Sciences website (http://i2s.anu.edu.au/resources). These resources are useful 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 tools (concepts and methods), case studies and/or approaches relevant to i2S - either a useful compilation or one or more examples of note. We also provide information about journals, professional associations & networks and conferences where researchers can learn from others, report their findings and interact with like-minded peers. The newsletter also reports on discussions in the LinkedIn group "Global Network for Research Integration and Implementation": https://www.linkedin.com/groups/4888295/ (when these occur) and new entries on the Integration and Implementation Insights blog: http://i2Insights.org.

i2S News is archived at: http://i2s.anu.edu.au/what-i2s/i2s-publications/i2s-news.

Useful links:
- i2S website: http://i2s.anu.edu.au
- i2S on YouTube: https://www.youtube.com/user/i2sTalks
- LinkedIn group "Global Network for Research Integration and Implementation": https://www.linkedin.com/groups/4888295/
- i2Insights blog: http://i2Insights.org

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