



Systems theory and complexity: Part 4 The evolution of systems thinking

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Introduction

The focus throughout this series has been the consideration of general systems ideas from a complex systems perspective. This task in itself is hopefully useful to complexity thinkers and general systems thinkers alike. However, as has already been mentioned in previous installments, systems thinking has evolved considerably since the early days of General Systems Theory (GST). The developmental pathways that systems thinking has trodden during the past quarter of a century contain lessons that may facilitate, both directly and indirectly, the future development of *complex* systems thinking. It wasn't so long ago that complexity thinking was synonymous with bottom-up computer simulation. However, in the past 5-10 years we have seen other threads emerge from this mathematically focused starting point that acknowledge the profound philosophical implications of complexity (implications that are not too dissimilar to those that triggered the soft systems movement in the last 70s, early 80s), and the value of qualitative methods and methodologies to the understanding of complex problems (sometimes labeled 'messy', or 'wicked', in the systems literature). The path from abstract mathematics to critical pluralism bears such a resemblance to the path from GST to systemic intervention (for example) that it is difficult to ignore the lessons that complexity thinkers may glean from a study of the modern systems literature and its recent evolution. Given the deep similarities it is strange indeed

that these two bodies of literature currently co-exist almost independently from each other.

As advertised in part 3 of this series (Richardson, 2005), this final installment is concerned with the recent evolution of systems theory/thinking. Since part 3 was published, ISCE Events organized the 1st International Workshop on Complexity and Policy Analysis that was hosted by the Department of Government University College Cork, Ireland which ran from 22-24 June, 2005 (an edited book of papers is due to appear later this summer, Dennard, *et al.*, 2007). On day three of this event the participants listened to a presentation that not only briefly summarized the recent history of systems theory/thinking, but also looked at some of the connections with complexity theory and provided some short examples of modern systems practice. The focus of this lecture, titled "Systems thinking for community involvement in policy analysis" given by Gerald Midgley of ESR in New Zealand, matched so closely the original plan for the final installment of this series that it was decided to base this installment on the edited transcript of Gerald's presentation. So here it is...

References

- Dennard, L., Richardson, K. A. and Goktug, M. (2007). *Complexity and Policy Analysis*, Mansfield, MA: ISCE Publishing, forthcoming.
- Richardson, K. A. (2005). "Systems theory and complexity: Part 3," *Emergence: Complexity & Organization*, ISSN [1521-3250](https://doi.org/10.1515/1521-3250), 7(2): 104-114.