BOOK REVIEW

The Manager's Guide to Systems Practice

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The Manager's Guide to Systems Practice
Frank Stowell and Christine Welsh
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In the middle of an SSM case study, as part of a module on systems thinking, a student burst in to my office with questions and ideas exclaiming 'This is doing my head in'. This was not a complaint or an admission of defeat, rather in the enthusiasm of gaining new knowledge, he recognised the difficulty of the change in thinking and perception that systems thinking demands. I took this as a compliment because the teaching of systems ideas and systems thinking requires a change in mindset, something no less than a paradigm shift.

Considering problems, organisations and human activity in a holistic manner goes against the grain of the inbuilt approach to knowledge and understanding that is culturally embedded. We are taught to reduce problems, to isolate factors, to ignore the whole in order to concentrate on the specific. Problems are broken down and the individual elements addressed. This is the essence of information systems design and of programming. It is also the way managers think. Isolating elements of a problem, attributing cause to individual factors has the advantage of reducing uncertainty and making difficult and complex phenomena straightforward and controllable. Indeed managing uncertainty and reducing problems to simple constituent parts is what management is about.

But the problem is that organisations and human activity are immensely complex, that outcomes result from the interaction of many parts and the elimination of uncertainty results in the overlooking of critical systemic interactions and basically a failure to manage. This is seen in the failure of so many information systems and the multiple organisational failures we see in both the private and public sector. And embracing complexity goes against the command and control mindset which requires the isolation of key factors.

So the task of educating managers and students in systems thinking is a difficult one. And a book like Stowell and Welsh's Guide faces a number of problems in trying to get managers to understand the value of systems thinking, to

grasp the different philosophical and practical mindset required and to gain practical skills in systems thinking.

Any text or course tackling systems thinking should meet a number of objectives:

- Establish a basic understanding of the concept of a system. The idea of a system is so woolly that there is always a need to clarifying meaning and rise above the popular perception. Systems have a set of properties which, when understood, demand a different approach to study;
- Develop a justification of the need for systems thinking. It is in the failure of government IT, the immensely complex interactions in climate change, the connectivity in social improvement systems, that practitioners and teachers are constrained to seek a systems perspective;
- Create a familarisation with the range of key concepts of a system. Connectivity, emergence, feedback, hierarchies, networks are all ideas which need exploring, setting in context and illustrating;
- Develop skills in systems technique. Systems practitioners need a whole new set of tools for describing and analysing systems . The more visual and illustrative the better. Linear text is often defeated in its attempts to describe a dynamic and networked system;
- Establish an understanding of the nature of social systems and their differentiation from physical, or machine systems. Most problems we tackle which require systems thinking require human interventions, they are human purposeful activity systems in which reason and logic are tempered by the complexity of culture, context, and the power of human relationships;
- Explain the main methodological approaches, their techniques, their integration of tools and their philosophical approaches;
- Locate systems thinking in its historical, scholarly and cultural context. The discipline of systems is relatively modern. An understanding of the discipline's origins is

valuable. The ideas of key thinkers such as Forrester, Checkland and Beer emerge with a scholarly, technical and social context.

The Manager's Guide to Systems Practice covers all of these with varying degrees of success. The text divides into four sections. Part 1 introduces key systems ideas, covering an introduction to the idea of a system, concepts such as open and closed systems, positive and negative feedback, black boxes. Part 1 ends with an introduction a range of methods including the viable systems method, soft systems methodology, the appreciative inquiry method developed by Stowell and systems dynamics. Part 2 explores some systems concepts in more depth. Boundaries, hierarchies and emergence are examined, along with the concepts of autopoiesis and socio-technical systems. In Chapter 5 we examine the core concepts of systems dynamics, the work of Sir Geoffrey Vickers, the conceptual foundations of soft systems and the concept of requisite variety. The viable systems method is revisited using classic diagrams from the Brain of the Firm.

As the book progresses, we drift away from the concrete concerns of the manager into the more rarefied atmosphere of the philosopher, a domain which is explicitly addressed in Chapter 6. A tour of the systems movement, hermeneutics, of Gadamer, Husserl and Heidegger becomes increasingly demanding; culminating in a brief exposition of Habermas and the Theory of Communicative Action. Crossing the paths of characters from Foucault to Giddens, we arrive at the door of the action researcher for an exploration of action research founded on the FMA model and the work of Champion in the PEArL mnemonic. Our return-to-earth is achieved through the exploration of the case study of a fictional railway company in Chapter 8 and further case studies set in a hospital and an airline in Chapter 9. Usefully, as you would expect in a book introducing a discipline, there is a glossary and an extensive reference list.

The book has a symphonic feel to it, where themes are introduced early on, developed, and revisited. Black boxes, feedback, apprecia-

tive enquiry and requisite variety are stated, introduced and revisited in developments and variations whether explicitly or weaved into other expositions, recapitulations and codas.

For a manager, the book will repay careful study, and take her beyond the restrictions of everyday organisational issues and problem solving. New ideas emerge and the development of themes will lead to new insights which may be pinned down in new methods. Perhaps it will encourage practitioners to explore the viable systems method and apply it in the environment, or to recognise the need for engagement in context, power and culture that the soft systems methodology requires.

In using the text for teaching and introducing systems thinking I have found it necessarily to direct students to chapters and extract sections, rather like using an extract from a second movement on a popular classics radio station and leaving the whole symphony for the serious music aficionado. The introduction to the concepts such as hierarchy and boundary are useful, as are the introductions to systems dynamics and soft systems. The in-depth critical theory can be skipped; although for me it was revealing to understand the links between systems thinking and critical theory.

However, as Mozart's work was criticised for having too many notes, a general perception of the intensity of his music, this book perhaps has too many words. The systems discipline is an illustrative discipline which thrives on pictorial representations of complex interactions. There is a need for the practitioner to explore means of explaining and illustrating complex dynamic, human and social interactions. The systems researcher should be seeking to expand the repertoire of diagrams available and creating new ones. Describing complex systems interactions in an organisation quickly defeats formal linear text.

I set my students a coursework where the complex systems behind the failure of a UK Government IT system (my students are spoilt for choice) may only be described using an armoury of diagrams: both established tools such as rich pictures and causal maps, and any other diagrammatic approach they can bring to bear on the problem. More pictures, illustrating concepts would help the besieged manager who may not have the patience for dense text.

Shostakovich's Leningrad symphony has an underlying theme of terror and invasion which lingers unresolved. For Stowell and Welch, the underlying theme of the battle between the positivist and the interpretive simmers throughout, unresolved. In an environment where positivism and the search for numbers in sociological enquiry is increasingly dominant, the interpretivists may feel under siege. While clearly systems and phenomena in a human setting are driven by human interpretation and cannot be reduced to numbers, equations and statistically provable facts, the desire to impose a positivist view of the kind demanded in sociology by Durkhiem and his followers is increasingly attractive to systems researchers.

So for managers faced with an increasing fetish for numbers and management by statistics, fuelled by the rise of business intelligence and big data, the study of Stowell and Welsh's book will provide a sobering reminder of the subjective and irreducible nature of human systems.

Finally I should perhaps declare an interest. Stowell and Welsh's book is partly a response to my calls for systems thinking texts at some UK Systems Society conferences. But unlike my empty handwaving, Stowell and Welsh have stepped up to the plate to put in the hard work to produce a worthwhile systems thinking text for a discipline that is sorely short of introductory texts. For the manager grappling with complex organisational problems, the teacher grappling with blinkered student thinking, and the researcher contemplating systems approaches this should be a book well-used, well-thumbed and secure in its prominent position on the office desk.