And miles to go before we sleep


September 30, 2004 - Book Review

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It should not surprise us, Robert Nozick warns, “that it takes time to achieve clear and precise formulations of new and difficult concepts, such as those of quantum mechanics” (Nozick, 2001). His warning isn't directed specifically at readers of this journal. But it might as well be. The field of social complexity theory, the application of complexity principles to human systems, is clearly evolving. In its first phase, those of us in social complexity have replaced traditional management theory with principles from complexity theory – simple guiding principles for bureaucratic procedures, emergence for prediction, encouraging relationships for maintaining direct lines of report – and begun to implement them. In the last few years, a second phase of this process commenced, exploring the deeper possibilities complexity principles hold for organizations, as in Stacey’s work with complex responsive processes (Stacey, 2001). It is in the context of this evolution that Complexity and Healthcare Organization: A View from the Street presents a fascinating study for readers of ECO.

Co-authored by 11 healthcare practitioners for Britain's National Health Service (NHS), 10 academics and seven consultants, Complexity and Healthcare Organization, edited by David Kernick, a general practitioner, is an intelligent beginner's guide to social complexity theory and how it has been implemented in the British healthcare system. Its real value to us, however, is not in what the co-authors set out to accomplish, but, rather, in the way it challenges us to more intensely explore the second phase of social complexity theory.

This is not to diminish the co-authors’ achievements in this book. Kernick, for instance, demonstrates a sophisticated understanding of the difference between the traditional and complexity understanding of culture. From a complexity viewpoint, he writes, culture is “an emergent property arising from the continuing negotiations about values and meanings between the members of an organization.” Moreover, he, like many of the co-authors, seems aware of the difficulties inherent in applying complexity principles to social systems, including the 45 current definitions for complexity. Many of the examples of applying complexity are also valuable. One of the fascinating things about an earlier book on complexity in healthcare, Edgeware (1998), to which I contributed, was the repeated structure of its stories of complexity application:

- managers had a difficult problem;
- they solved it, but were mystified by how they did it, until they studied complexity;
- then they realized that complexity explained their success.

Most of the stories in Complexity and Healthcare Organization conform to this pattern. A major difference from the earlier book is that Peter Fryer, a management consultant, states this realization explicitly:

"Rather than studying the theory and then trying to apply it in practice, we seemed to do it the other way around. We just kept trying things (many of which didn’t work or we got wrong) and then we found the theory that explained what we were doing or what was happening. This enabled us to ask new questions and then to refine what we were doing, which led to us trying something new."

Or as Paul Thomas, a healthcare academic, notes, “I like complexity theory because it allows me to believe in common sense.” Rather than thinking of complexity theory as an entirely new way of experiencing the world, he suggests, it provides an accurate description of the way people actually behave, as recognized in common sense.

Two of the stories are especially worth comment. The first of these, “Complex Adaptive Systems: Interesting Theory or Useful Practice? The Piedmont Hospital Bed Control Experiment,” details the effort to improve the process of getting patients into beds at the Piedmont Hospital. This story, co-written by an administrator, Leigh Hamby, a nurse, Laura Day, and a consultant, Sarah Fraser, began as an “experiment with thinking about healthcare organizations as complex adaptive systems.” As the consultant explains, “I realized that if I wanted results different than my prior experience with change, I was going to have to be different” (author’s italics). For this reason, she resolved to plan less, stop telling others how to change, and stop resolving conflicts in the project. In this way, the project evolved as she challenged participants in the project to find and elaborate on ideas. The result

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was not only superior bottom line results, but also better relationships among those participants. Most notably, the project was, unlike any in *Edgeware*, a conscious attempt to address difficulties using social complexity theory.

The second of these stories, “Community Regeneration and Complexity,” was, for me, the most valuable. In this story, three members of the faculty of Peninsula Medical School describe the regeneration of the Beacon and Old Hill Estate, a community so deprived that, by 1995, neighboring communities were calling it “Beirut.” Through several series of meetings, among residents and representatives of health, education, social services, local government and police, the community created the Beacon Community Regeneration Partnership in January 1997. With the funding it was able to gather, the Partnership engaged in a variety of activities, including communicating across the community, installing central heating in many units, and establishing a healthcare center. By 2000, the crime rate had dropped 50 percent, and post-natal depression had decline by more than 70 percent. In 1999, there were no unwanted teenage pregnancies. Moreover, participants built safe play areas for children and introduced education related efforts that resulted in significant improvement in standardized test scores.

While this effort illustrates several complexity principles, primarily the use of networks and self-organization, its significance, for me, is the challenge it provides for further study. For example, how do the principles of complexity help us understand why measures of health should improve so much as a devastated community regenerates itself? When one views social systems as nested complex systems, it becomes clear that the “healthcare system” can be examined as much more than the community of professional healthcare providers (see Baskin, 2000). After all, most people who wake up ill are taken care of by their families, and we all learn our attitudes toward nutrition, addictive substances, exercise and professional healthcare providers in the family. In fact, a person’s health can be strongly affected by everything from the economic prosperity of his/her community to its education and criminal justice systems.

Given the way communities seem to function as if they were complex systems, those of us exploring social complexity theory face a series of fascinating questions as we examine how the dynamics of a community are critical to the health of its individuals. How, for instance, can healthcare professionals involve family in encouraging a healthy lifestyle for their members? Or, what kinds of relationships are possible between schools (the formal education system) and local hospitals and health clinics? A full examination of these questions will, I believe, present the possibility that “healthcare” is a function of the community as a whole and that, in communities with strong economies and education systems, a different relationship between healthcare providers and clients will emerge, as demonstrated at the Beacon and Old Hill estate. None of these questions, however, is considered in the discussion of it in *Complexity and Healthcare Organizations*.

One other issue is conspicuous in its absence from this book. Several co-authors praise dialogue highly. Hambr, Day, and Fraser discuss the value of the dialogue that enabled participants in their project to improve their hospital’s work processes. Similarly, Thomas, in his chapter “Applying Complexity Theory to Primary Healthcare Organizations,” praises the effects of dialogue on improving a variety of such processes. Yet, no co-author applies dialogue to the issue of what people mean by the terms “health,” “healthcare,” and “healthcare system.” As a result, no one questions the basic goals of the NHS. Is the “health” this system is supposed to produce merely the absence of disease or is it also a socio-psychological matter? How do different definitions affect the kinds of services the NHS ought to provide? What are the healthcare implications of fastfood commercials? How should the NHS address that? And is the healthcare system composed merely of professionals in relation to their clients? Or, as suggested above, are all members of any community part of that system? Once again, the way these questions are answered goes a long way toward establishing what the NHS is about. Yet, all the co-authors of *Complexity and Healthcare Organizations* overlook the potential value of conducting a system-wide dialogue on these questions.

I hope this doesn’t seem overly critical of these co-authors. In his book on complexity and healthcare, currently in manuscript (2004), Hugo Letiche discusses how difficult it is for professionals in any field to conduct this kind of dialogue, because it demands that they question even their most basic assumptions. In such Socratic dialogue, one often has to face that one “knows” a lot less than one assumes. And this can be both painful and personally threatening. Yet, as Letiche insists, such dialogue seems essential if healthcare professionals are to create lasting change. Until healthcare professionals articulate the assumptions on which they act, efforts to improve the quality of healthcare are likely to be undermined by those very assumptions. As Letiche notes, this is what happened in Ford’s effort to design the Taurus. Because the underlying assumptions were never explored – whether, for instance, it makes sense to continue producing gasoline-burning vehicles today – the improvements were short-lived, and today Ford faces the same problems as it did when it began this experiment.

It is therefore interesting that two co-authors, Fryer and Thomas, note the fragility of their efforts. In the context of a system firmly embedded in its traditional assumptions, these experiments in “the way care is perceived, organized and delivered,” as Helen Bevan of the NHS Modernization Agency puts it, remain vulnerable. Developing the tools and understanding that will be needed if these experiments are to survive until the entire system becomes transformed is the chief challenge *Complexity and Healthcare Organization* presents to *E:CO* readers. The needs to explore the full complexity of multi-leveled social systems and to carefully examine the assumptions of our clients are only two possible directions in social complexity research. Your own reading of this book may turn up others. It’s a lot of work before we “sleep.” But at least it’s exciting work.

**References**

REFERENCE LINK


