Complexity and Knowledge Management

Understanding the Role of Knowledge in the Management of Social Networks

A volume in
Managing Organizational Complexity
Kurt A. Richardson and Michael R. Lissack, *Series Editors*

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Understanding the Role of Knowledge in the Management of Social Networks

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To Dominic . . . always one step ahead of me.
—AT

For Alexander, Albert and William . . . whose nonsense makes more sense than not!
—KAR

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SECTION 3

TOOLS FOR CREATING, MAINTAINING, AND USING KNOWLEDGE

INTRODUCTION

Are we crazy?! Seemingly not content to grapple with the amorphous science that is complexity, we've decided to edit a book that throws the equally nebulous concept of knowledge into the mix! Shouldn't we try and deal with them separately before getting them all tangled up?

Well . . . as complexity researchers[1] we have no choice but to tackle everything at once. This is the cross we bear for being right, isn't it? More than once we've been importuned by our partners to "Focus!" only to plead, "But it's complex!"

There would seem to be a strong case for studying knowledge as a socially constructed phenomenon—to put it mildly (Surowiecki, 2004; Sanger, 2007). In this case, knowledge is clearly inseparable from the complex social systems that spawn it (and their management)—which leads us to this ambitious volume.

Writing an introduction to an edited collection is something that we take very seriously. Many talented researchers have taken the time to write thoughtful and insightful articles. We are responsible for preparing the reader to embark on his journey through the intellectual landscape created by the assembled authors.

Writing about complexity is challenging. It is a constant battle to maintain any kind of consistency. The very nature of a traditional article—a linear presentation of ideas—tugs at the foundation of most complexity research. This is exacerbated when writing about a complex collection of complexity articles. A golden opportunity was missed in the third volume of this series—Making Healthcare Care (Letiche, Lissack and Richardson, 2007)—to study the correlation between seeing the world in complexity terms and the use of Prozac®.

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So, what is the role of an introduction to this kind of collection? Is it to provide a short description of each article, allowing the reader to selectively delve into the volume? No. We believe that the best summaries of the articles are provided by the authors' own titles and introductions. Our clumsy attempts to distil the contents of an article into a sentence could only do violence to the carefully crafted ideas.

Should an introduction attempt to classify the collection—e.g., to make it more manageable? In a sense, we've done this by splitting the volume into three sections.[2] However, if we're honest, this classification is no more that a loose indication of the general thrust of an article. We felt guilty even as we included it in the call for papers. Any further classification would be intellectual fraud.

What about using the introduction to present our own vision of the role knowledge plays in the management of social networks? This would seem to be a little arrogant. We have no special insight into this issue—just our own views to add to the rest. If we have something to say, we should say it in one of the collected papers like everyone else.

No, we don't believe that these "traditional" forms of introduction serve us or, more importantly, the collected authors, well. Instead, we'd like to use the introduction to elaborate on the problems and questions that led us to instigate this project. It is these that provide the context for what is to follow.

Oh, and we'll try and keep it short—so you might actually read it. We know from our own experiences as readers that we rarely peruse introductions that are as long as the articles themselves. If we're going to invest that time it'll be in the main feature—not the commentary.

As we write this introduction, it seems as if attempts to use knowledge to understand and manage social networks are everywhere. Millions, if not billions, of dollars are being spent in an attempt to derail terrorist networks (Harris, 2006), with much of it being invested in making sense of massive data streams (DeYoung, 2007). There is growing concern that much of this money is being squandered on approaches that will never deliver on their promises (Schneier, 2007).

Our armed forces are being prepared to combat terrorist threats by the introduction of "network centric approaches" and "digital battlefields"—basically attempts to provide warfighters with a complete picture of the battlespace. However, the experience of practitioners suggests that the "data smog" this creates is actually counterproductive.[3]

From the arena of politics, the recent invigorating battle between senators Clinton and Obama has thrown the spotlight on the deficiencies in political polling (Economist, 2008b). Changes in the structure of the situation (e.g. high turnouts) have thrown the whole industry into chaos. Complexity is being discounted and the results are stark. The conclusion formed in the media was that the situation was wildly unpredictable (so anyone's to win),

and ended up having real consequences for the Democratic challenger in November 2008 (Baldwin, 2008).

Turning to business, we find that Société Générale recently lost $7.2bn as the result of a single rogue trader making a series of bogus transactions amid turbulent markets in 2007 and 2008 (Viscusi & Chassany, 2008). There has been much speculation on what was known, when it was known, and who knew it (Economist, 2008a). In other words, we have speculation that this is an example of the role of knowledge in the *mis*management of social networks—with spectacular effect.

And last, but by *no* means least, we have the issue of man-made global warming. For those considering the role of knowledge in the management of (social) networks, this is surely a doozy.

At a glance, the problems highlighted above seem positively overwhelming. Where do you start? But start we must. Simple "cause and effect" thinking doesn't seem to be able to cut the mustard. There is broad agreement that even if the Kyoto targets were fully met, on schedule, by 2100 it would only delay the warming of the planet by six years (Parry *et al.,* 1998). We need to utilize knowledge in new ways . . . or maybe uncover insights from old ways.

It is tempting to see the need to understand the role of knowledge in managing social networks as a relatively recent requirement. Certainly the rapid growth in the use of Information and Communications Technologies in the latter decades of the twentieth century is an obvious catalyst—as is the globalization it has spurred. Of course, the challenge has been with us since the dawn of life. Ecological systems have been utilizing knowledge (at varying degrees of consciousness) to adapt to their environments for millions of years. In fact, a recent collection of papers attempts to show us how the study of natural systems can help us design effective security in the post 9/11 era (Sagarin & Taylor, 2008).

We find it hard to think of something more worthy of attention than the role of knowledge in the management of complex systems.

In addition to grasping the issues, we need, as a research community, to put tools in the hands of decision and policy makers. The research paradigm we share advocates engagement with the environment, yet, paradoxically, we don't seem to have managed to make mainstream tools available to those outside of the community. This is a major failing. If we can't provide these tools, we will continue to punch below our intellectual weight. In editing this volume, and others, we are regularly struck by how little of the great ideas we are privileged to see make it all the way to being adopted by the "great unwashed."

As we press forward, in all areas of complexity research, we must be cognizant of the need to help our ideas make a difference. Unless we can take them all the way, we will be little more than a reading group.

So, let us now take a step back and let greater minds than ours enthrall you with such heady topics as the definition of knowledge, the role knowledge plays in creating and managing complex system, and the application of these ideas to enhancing the world in which we live.

NOTES

1. We use the term "complexity researchers" to refer to all those working in the complexity field (e.g. academic researchers, practitioners). After all, all those utilizing complexity concepts are liable to find themselves at the bleeding edge.
2. "What is knowledge?", "The role of knowledge in social networks" and "Tools for creating, maintaining and using knowledge."
3. Expressed in a private communication between one of the authors and a senior military officer.

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