

Guest editors' introduction

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Emergence of third order cybernetics

Much to the surprise and delight of the co-editors, this special issue of *Emergence: Complexity & Organization* on complexity and storytelling appears to mark more a beginning than an ending. For, while the publication of any journal is the end of a discrete project, what we are learning from it suggests the opening moves in a game of exploration pursuing a fascinating question: Are the studies of storytelling, in its widest sense, and of complex human systems largely the same thing? At first, that seemed an obvious overstatement. Yet, in the process of developing this special issue, both of us have concluded that it is a question that is, *at least*, worth exploring. In this way, we offer you this special issue as an introduction to the possibility that the dynamics that arise as people tell stories, to themselves as well as to others, and then enact those stories, create the dynamic human systems - families and neighborhoods; workgroups, organizations, and economies - that Ralph Stacey's (2001) conception of *complex responsive processes* seems to deny.

Some readers may say that this exploration is hardly new. In fact, nearly 30 years ago, Louis R. Pondy's essay "Beyond open system models of organization," included as a classic complexity article in this issue (see pp. 122-139), lays out the challenge to launch into just such an exploration as the co-editors believe this issue represents. Basing his argument on Boulding's nine levels of system complexity, Pondy insists that organizational theorists are locked into analysis based on the lower levels of complexity. Given the then-current understanding of organizations, analysts should think of them less as 'input-output' machines and more as 'language-using, sensemaking cultures'. What is needed, as a result, is "radical methodological departures [such as] ethnographic techniques more suitable for studying meaning and belief systems." The theme articles in this issue play with a variety of such departures.

Moreover, mostly over the last five years, a significant amount of work has been compiled applying complexity and storytelling to organizations, answering Pondy's challenge after only a quarter century. Already, three practitioners - Carl Weick (1995), Dave Snowden (see Kurtz & Snowden, 2003), and David Boje (2001) - have developed

sophisticated approaches to this study. What makes this issue of *E:CO* new and exciting is an explosion of interest in this developing area of study. Previously, the intersection of complexity and storytelling studies had been applied largely to organizations. However, among the more than 40 proposals we received were abstracts whose subject ranged from economics and law to disaster control, healthcare, and oriental literature. As a result, we began to suspect that this evolving hybrid field could suggest a powerful approach to the application of complexity thinking to all human systems. Nor are we the first to suggest this. One contributor to this issue, anthropologist Michael Agar, has observed elsewhere (Agar, 2005), that the most effective methodology to complexity-based social studies is ethnography.

In some ways, it seems odd that the intersection between complexity and storytelling has been so little examined. For one thing, the two studies have grown on remarkably parallel tracks for the last 15 years or so. During this time, both studies have been adapted from their origins - complexity in the natural sciences and narrative/storytelling in literature - and applied increasingly to organizations, but in a somewhat limited way. Complexity studies of organizations have been largely limited to considering organizations as (narratively) coherent entities in market ecosystems, ignoring what complexity thinking suggests about the dynamics of organizations as ecosystems for the people working in them. Some work on organizations as ecosystems has begun to appear in, for example, the work of Brenda Dervin, *et al.* (2003) or Ken Baskin (2005b). Similarly, the vast majority of the work on narrative in organizations has explored its function on the level of the organization and in its function for managers. It's only in recent years, as writers such as Weick, Snowden and Boje have applied the double lens of complexity and storytelling, that attention has begun to focus also on how people within organizations use narrative and storytelling quite differently. Here, a thaw of sorts is occurring, as those studying the field move from narrative, with its implications as a complete linear-construction (with beginning, middle and end), to storytelling, with its suggestion that some stories are emergent attempts to formulate and negotiate the understandings held as *finished* in narrative study.

In addition to these historical similarities, the two studies (story-emergence and complexity) seem an almost ideal fit for each other. On one hand, some writers on storytelling are beginning to recognize it as an emergent phenomenon, sensitive to initial states, that groups negotiate in their interactions. On the other, some writers about complex human systems are beginning to recognize that storytelling drives the human equivalent of attractors at several levels - personality, group dynamics, and culture. As a result, the principles of complexity and storytelling come together as a series of strands that, like a rope, when woven together, form a more powerful tool than either alone.

Given all that, it seems only fitting that the co-editors of this issue approach this intersection of studies from opposite directions. David Boje (2001) came to it through his study of *storytelling organizations*. In his studies, he has focused on the difference between 'antenarrative', the preliminary stories people tell as they begin to understand what might be happening around them, and the more fixed (whole, linear) narratives, which are explanations of what people believe actually happened. Along with this view of storytelling, Boje (1995) had developed the idea of the organization as 'Tamara', a house with many rooms in which people in different rooms simultaneously tell different stories about the same events, experienced from their differing points of view, networking with one another to make sense of the divergent storylines. Much of the dynamics of any organization, he suggests, arises in the negotiation that occurs as people enact these different stories about common events in distributed locations.

On the other hand, Ken Baskin approached this intersection from his work in applying complexity thinking to organizations. His 2001 research study on workgroup cultures in three American hospitals, funded by ISCE, brought him to the conclusion that the stories people tell, to themselves as well as others, create the human equivalent of attractors - personality in the individual, group dynamics, and culture in organizations and other larger entities (2005a). His most recent work (2005b) suggests that, in addition to being coherent units existing in market ecosystems, organizations can be examined as ecosystems of storytelling groups, a concept with much in common with Boje's Tamara.

When we first issued the call for abstracts on complexity and storytelling, we had no idea that so many people had begun thinking about the function of storytelling and complexity in the various fields

in which they worked. We quickly discovered that interweaving the principles of these areas of study was proving absolutely as illuminating as we had suspected from our own work. The nine topical articles published in this issue will give the reader an idea of the variety and excitement of thought among those combining the insights of complexity thinking and storytelling:

- Theodore Taptiklis's "After managerialism," for instance, contrasts managerialism's tendency to reduce complexity with the approach supported by this journal, among others, to confront the complexity of contemporary markets. He examines his work with organizations to record and share the narrative experience of professionals in order to foster emergence and creativity.
- In "Narrative processes in organizational discourse," John Luhman discusses organizational discourse as a complex system that includes three processes - storying coercion, story weaving, and story betting, the last of which reflects Boje's antenarrative theory. For him, narratives provide a "field of choices in which meaning takes place." In organizations managed as complex systems, these choices can create the rich diversity from which innovation emerges.
- Michael Agar's essay, "Telling it like you think it might be," explores a methodology for analyzing organizational storytelling. At a time when so many organizations are trying to transform management style from the traditional mechanical model to a more complex one, Agar offers a way of measuring the degree of complexity recognized in any organization's operations, through examining five elements of the storytelling.
- Taking a different tack in "The use of narrative to understand and respond to complexity," Larry Browning and Thierry Boudés compare two of the major models for using "narrative as a sense-making response to complexity." In examining David Snowden's Cynefin model and that of Carl Weick, Browning and Boudés conclude that, in spite of the many differences in these models, they are remarkably similar, especially in their emphasis on widespread participation and "management by exclusion."
- In "Wanted for breaking and entering organizational systems in complexity," Adrian Carr and Cheryl Lapp take a Freudian approach to the function of narrative in organizations transforming from a traditional model to a more complex one. Introducing the principles of complexity into such an organization, they note, demands

that people in the organization co-create stories that cannot help but cause anxiety. It is through the pain created in the destruction of old certainties, which the authors insist people cling to as an expression of Freud's 'Thanatos', that the creative energies of 'Eros' emerge.

- Doug Smith's "Order (for free) in the court" examines the legal system as a complex system that has evolved as a result of what he has called "full-contract storytelling." Rather than the traditional view that law is a system governed by rules, Smith insists that it depends on a self-reinforcing cycle of learning and retelling stories in law school and then anticipating and countering the stories of others in practice. In court lawyers use stories to reduce the complexity of life in order to win judges and juries to their clients' points of view. Ironically, this central role of storytelling in the legal system remains unacknowledged.
- Similarly, Michelle Shumate, Alison Bryant and Peter Monge argue, in "Storytelling and globalization," that networked global organizations engage in "narrative netwar" in order to affect the ideological landscape. Using the Direct Action network's protest of the World Trade Organization's 1999 meeting in Seattle as an example, they explore how people in both networks use narrative to simplify an issue as complex as global trade in order to persuade people to support their positions. The world is much more complex than any one story can communicate; by reducing that complexity with narrative, they can make their cases, suggesting that those narratives are the reality.
- Finally, Check Teck Foo's essay, "Three kingdoms, sense making and complexity theory," examines the famous Chinese novel, *Romance of three kingdoms*, as a narrative about the phase transition between the Han and Jin dynasties. Rather than a monolithic narrative, the story is presented as a collection of short stories with interlocking characters, whose interactions eventually result in the reemergence of orderly government. As a novel about social phase transition, he notes, this work offers insights into how today's leaders and approach the chaotic developments of our own period.

If, in fact, this intersection between the study of complexity and of storytelling is as powerful as the co-editors suspect, an enormous amount of work remains. Those exploring it are only beginning to develop methodologies and a vocabulary.

We would like to offer a bold conclusion, one that is an answer to Boulding (1968), as well as Pondy's (1976) challenge to system/complexity theory. We think that the difference between coherence-narrative and the more emergence-storytelling theories is the dawn of the 'Third Cybernetics' of dynamic complexity. Boulding made it clear that for systems theory to theorize and study higher orders of complexity, we need to differentiate between sign-representations (e.g., narratives as the 'mirror' of experience). First and Second Cybernetics has been dominated by master-narratives, each with a particular metaphorization: level 1 (frameworks of narrative types); level 2 (mechanistic narrative); level 3 (thermostat-control narrative); level 4 (cell of the 'open system'); and level 5 (tree as 'organic' narrative). First cybernetics is the mechanistic-narrative of deviation-counteraction through the input-output-feedback sign-comparison model of communication. Second cybernetics is the open (cell) system narrative of deviation-counteracting (comparing narratives of the environment, systemically-organizing more variety to process them).

We think the articles point to a Third Cybernetics, where what Boulding calls image (managed in story, level 6), symbol (self-reflexion in story, level 7), societal discourse (social organization shaped by story, a domain of discourse, level 8), and transcendental (stories of unknowable and knowable, level 9). For Pondy, these upper levels are where language, story, and symbol, exceed the theory of 'open system' modeling. The problem is that narrative (conceived as linear metaphorization), does not come to grips with the needs of Third Order Cybernetics[1].

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Notes

[1] For more on ‘Third Cybernetics’, on relation of story and systemic complexity, see Boje (2006) *Storytelling Organization: Freeing Story from Narrative Prison* (London, UK: Sage); advance copy on line at <http://business.nmsu.edu/~dboje/690/book/index.htm>.