Book Review Section

Introduction

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This issue of *Complicity* presents six reviews. The first three discuss publications drawing from a scientific perspective and explore the themes of networks (Watts), connectedness (Barabási), and complex systems (Kelly). The remaining three reviews are of books that represent a more philosophical engagement with complexity. (von Foerster, Varela and Dimitrov and Hodge).

The first three of our reviews (of Watts, Barabasi, and Vargas) all articulate the need for a new science emerging from quantitative and qualitative research in the fields of physics, biology, and mathematics. The book review authors examine how this new qualitative language has import for investigations in the fields of sociology, education, business, and economics.

David Bowers examines Watts' text *Six Degrees: The Science of a Connected Ag*e to explore the ways in which interdependence, connectivity, and relationships are deeply embedded in any understanding of our increasing complex world. Bowers prompts readers to explore how Watts' text foregrounds the relationship between connectivity and learning communities that contests traditional understandings of education as a linear chain-of-command style of organization.

In his review of Barabási's *Linked,* Robb MacKay explores how emerging networks are more than a series of random connections. Instead, MacKay articulates how networks can be more accurately understood as decentralized and embedded in the everyday aspects of our lives. MacKay posits

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that Barabási's theories have relevance to how we understand pedagogy, curriculum, teaching, and learning both inside and outside of the classroom.

In the third of our clustered reviews, Andrew Breckenridge examines Kelly's text *Out of Control: The New Biology of Machines, Social Systems, and the Economic World.* Breckenridge highlights what Kelly describes as a "the neo-biological" age, which is characterized by complex adaptive and distributed systems. This new age is premised on the increasing convergence of the organic and physical world and the ways in which culture serves as a catalyst prompting non-linear evolution. Breckenridge highlights how Kelly's text can encourage educators to contemplate their classrooms as emergent and constantly evolving and self-organizing systems in which students can (and should) play an active role in orienting their own learning experiences. Breckenridge situates the classroom as a pedagogical intersection where both collective structure and individual agency meet and, in turn, greatly exceed any predetermined possibilities.

Book reviews from Gary Woodill, Darren Stanley, and an extended review by Claudia Vargas shift our focus from the scientific to the philosophical and ethical as they explore the respective works of Heinz von Foerster, Francisco Varela, and Vladimir Dimitrov and Bob Hodge.

Woodill situates von Foerster's *Understanding Understanding: Essays on Cybernetics and Cognition* as "a wide-ranging feast of ideas" and information. In this controversial text, von Foerster engages a genealogical approach to understanding complexity and the study of self-organization. Woodill highlights how von Foerster's work can provide "nuggets" of intriguing and useful information for critical educators who wish to examine and interrogate their own teaching as "legitimate" or "illegitimate" pedagogical practices.

Stanley provides an insightful review of Varela's classic philosophical treaties on *Ethical Know-How: Action, Wisdom and Cognition*. In this short, yet influential text Varela develops a critical ethical project utilizing a non-moralistic framework to develop an enactivist approach for understanding cognition and learning. As Stanley aptly concludes, "For those who seek to bring mindfulness to teaching and research engagements, [Varela's text] is an important work to ponder over and puzzle with."

Continuing to reflect upon the themes of mindfulness, decision making, and ethical action, Vargas provides a critical extended review of *Social Fuzziology: Study of Fuzziness of Social Complexity.* In her thought provoking discussion, Vargas introduces *Complicity* readers to Dimitrov and Hodge's treatise on social fuzziology (SF), which is distinctly different from fuzzy logic (predominant in engineering and artificial intelligence) and complexity (rooted in the life sciences), to explore SF as a science that studies humans as social agents embedded in a socially complex world. SF is not a

science concerned with developing grand narratives or scientific claims to truth, but rather, as Vargas suggests, it is "a kind of macro science concerned with the human capacity to make sense of the world." SF is inherently concerned with self-organizing and social dynamics that resist straightforward casual explanations.

Vargas highlights how SF, as situated by Dimitrov and Hodge, is both an ethical and pedagogical project that involves a constant state of being and becoming through a lifelong pursuit of knowledge and wisdom. In this light, Vargas is mindful to articulate how understandings of complexity science in general, and education in particular, can be enriched by utilizing SF as a complementary framework designed to employ methods to prompt holistic thinking.