

The Self-Organizing Universe: Scientific and **Human Implications**

Erich Jantsch

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The evolution of the universe - ranging from cosmic and biological to sociocultural evolution - is viewed in terms of the unifying paradigm of self-organization. The contours of this paradigm emerge from the synthesis of a number of important, recently developed concepts, and provide a scientific foundation to a new world-view which emphasizes process over structure, nonequilibrium over equilibrium, evolution over permanency, and individual creativity over collective stabilization. The book, with its emphasis on the interaction of microstructures with the entire biosphere, ecosystems etc., and on how micro- and macrocosmos mutually create the conditions for their further evolution, provides a comprehensive framework for a deeper understanding of human creativity in a time of transition.

The Self-Organizing Universe: Scientific and Human Implications Details

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From Reader Review The Self-Organizing Universe: Scientific and Human Implications for online ebook

G.r.khatri says

its best ever

Blaine says

This is one of the most profound books I've ever read. It's a sweeping scientific view of evolution chalk full of fascinating insights based on an application of non-equilibrium thermodynamic research in the dynamic self-organization of physical, chemical, biological, and social systems. Referencing Nobel Prize winning chemist Ilya Prigogine and his work in dissipative structures, order through fluctuation, and process structures, Jantsch walks through the evolution of evolution, the unfolding of the various stages of symmetry breaks in the evolution of complexity in the universe. This is no easy read but the view it presents is one that continues to unfold in the continuing research in complex systems theory, nonlinear dynamics, self-adaptive systems, and a host of related inquiries including the embodied systems approach in cognitive science.

Scott says

I've only just finished the introduction, and already I'm aware that this book was a couple of decades ahead of its time.

Just one example: Jantsch in 1979 already recognized that it was epigenetics, not genetics alone, that makes the difference for organisms. We rightly celebrated the triumph of the Human Genome Mapping project, but quickly realized that few of the hoped-for breakthroughs would result from simply knowing the entire genome. Genes alone don't determine outcome. Rather it is epigenetics, the interaction of the genetic code and the (environmental) circumstances of the individual organism. Popular science journalism recognized this with the Time's cover story on Epigenetics in Jan., 2010.

MedicalXpress.com wrote in March 2012, "Epigenetics is the hip new science."

In 1979, Jantsch wrote (p. 13, describing his Ch. 8):

"The emergence of eukayotic cells marks beginning of epigenetic development, the flexible and selective utilization of genetic information in line with the individual design of relations with the environment... [This shift] brings primarily new horizontal processes into play—after genetic information transfer has emphasized vertical processes. Each vertical, genetic development is being "processed" in a dense web of horizontal processes. This leads to a futher enrichment of genetic evolution by epigenetic dimensions. Finally, epigenetic development overtakes genetic development in importance as well as in speed."

This was 30 years BEFORE people started saying Epigenetics was the new thing. I guess people couldn't understand Jantsch.

So it's a dense book, certainly, but is quite breathtaking in its scope. It seems, too, that "The Self-Organizing

Universe" was also an early pre-cursor of the "Big History" movement which seeks to take a "Big" look at world history, starting from the Big Bang, moving through evolution, and on to a global perspective on the emergence of civilizations.

Can't wait to keep plowing into this book.

Miray says

a "big picture" systems-theory view of the mind and world, putting human intelligence in perspective

Yannick says

I can only re-emphasize what previous reviews always point out. This guy was literally decades ahead of his time. My favorite example, the gist of the book is literally about describing dissipative self-organizing structures as the foundation of life and the further evolution of complexity... as far as my experience goes, only this year, in 2017, researchers increasingly gain recognition for investigating such matters empirically and computationally (not just conceptually).