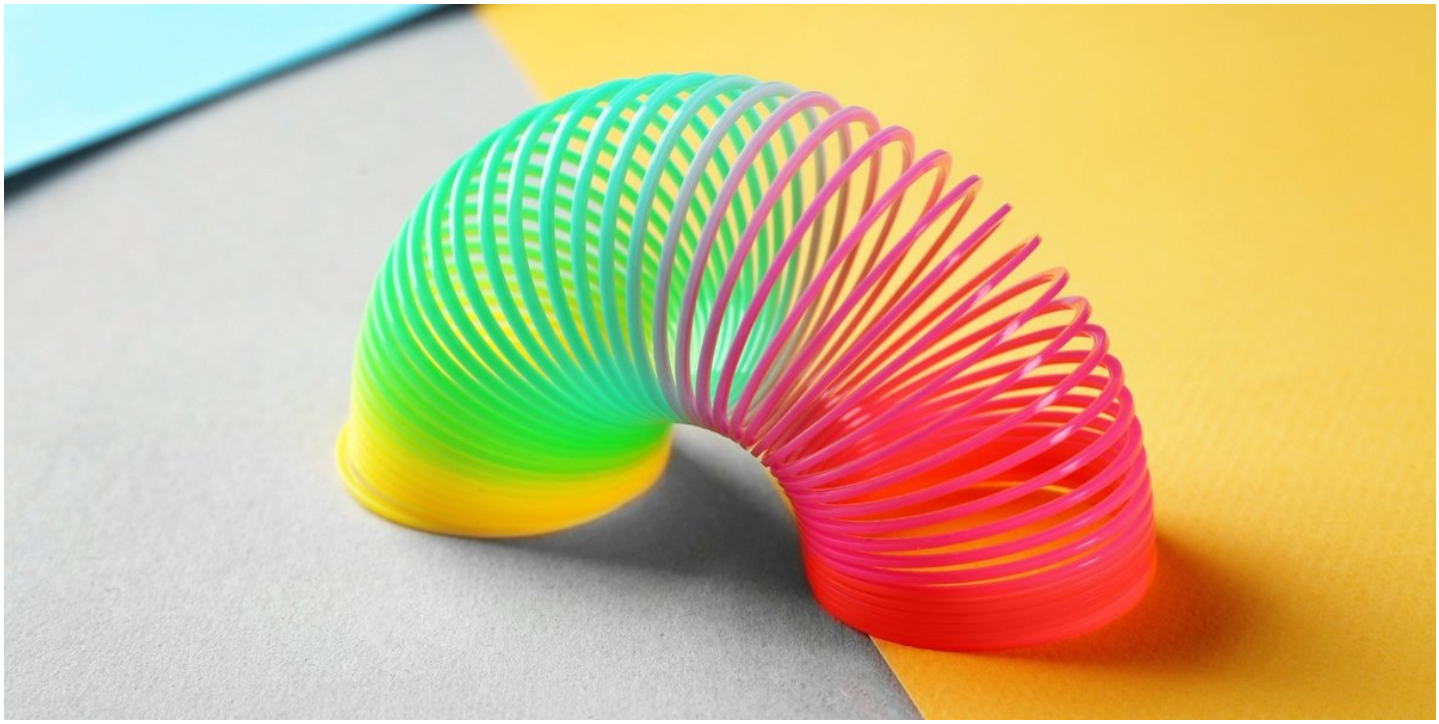
Twitter Thread by Sloww

Sloww
@SlowwCo

Want to be a better thinker?

"Thinking in Systems" by Donella Meadows is the top book on Amazon for System Theory with 1,000+ ratings.

Here are some highlights (thread ↓)



"Donella Meadows (1941–2001) was a scientist trained in chemistry and biophysics (Ph.D., Harvard University), followed by a research fellowship at MIT. There she worked with Jay Forrester, the inventor of system dynamics."

"This book is about that different way of seeing and thinking. It is intended for people who may be wary of the word 'systems' and the field of systems analysis, even though they may have been doing systems thinking all their lives."

— Donella Meadows

"Today, it is widely accepted that systems thinking is a critical tool in addressing the many environmental, political, social, and economic challenges we face around the world."

— Diana Wright

"A system is a set of things—people, cells, molecules, or whatever—interconnected in such a way that they produce their own pattern of behavior over time."

— Donella Meadows

"A system is an interconnected set of elements that is coherently organized in a way that achieves something ... A system must consist of three kinds of things: elements, interconnections, and a function or purpose."

— Donella Meadows

"Why do systems work so well? Consider the properties of highly functional systems which are familiar to you. Chances are good that you may have observed one of three characteristics: resilience, self-organization, or hierarchy."

— Donella Meadows

Three Truths:

"Everything we think we know about the world is a model."

"Our models usually have a strong congruence with the world."

"However, and conversely, our models fall far short of representing the world fully."

15 Systems Wisdoms

"These are the take-home lessons, the concepts and practices that penetrate the discipline of systems so deeply that one begins, however imperfectly, to practice them not just in one’s profession, but in all of life."

— Donella Meadows

1. Get the Beat of the System:

"Before you disturb the system in any way, watch how it behaves."

2. Expose Your Mental Models to the Light of Day:

"Mental flexibility—the willingness to redraw boundaries, to notice that a system has shifted into a new mode, to see how to redesign structure—is a necessity when you live in a world of flexible systems."

3. Honor, Respect, and Distribute Information:

"If I could, I would add an eleventh commandment to the first ten: Thou shalt not distort, delay, or withhold information."

4. Use Language with Care and Enrich It with Systems Concepts:

"Honoring information means above all avoiding language pollution—making the cleanest possible use we can of language. Second, it means expanding our language so we can talk about complexity."

5. Pay Attention to What Is Important, Not Just What Is Quantifiable:

"Pretending that something doesn't exist if it's hard to quantify leads to faulty models."

6. Make Feedback Policies for Feedback Systems:

"Especially where there are great uncertainties, the best policies not only contain feedback loops, but meta-feedback loops—loops that alter, correct, and expand loops."

7. Go for the Good of the Whole:

"Aim to enhance total systems properties, such as growth, stability, diversity, resilience, and sustainability—whether they are easily measured or not."

8. Listen to the Wisdom of the System:

"Aid and encourage the forces and structures that help the system run itself ... Before you charge in to make things better, pay attention to the value of what's already there."

9. Locate Responsibility in the System:

"'Intrinsic responsibility' means that the system is designed to send feedback about the consequences of decision making directly and quickly and compellingly to the decision makers."

10. Stay Humble—Stay a Learner:

"Systems thinking has taught me to trust my intuition more and my figuring-out rationality less, to lean on both as much as I can, but still to be prepared for surprises."

11. Celebrate Complexity:

"Let's face it, the universe is messy. It is nonlinear, turbulent, and dynamic ... That's what makes the world interesting, that's what makes it beautiful, and that's what makes it work."

12. Expand Time Horizons:

"In a strict systems sense, there is no long-term, short-term distinction. Phenomena at different time-scales are nested within each other."

13. Defy the Disciplines:

"In spite of what you majored in, or what the textbooks say, or what you think you're an expert at, follow a system wherever it leads. It will be sure to lead across traditional disciplinary lines."

14. Expand the Boundary of Caring:

"Living successfully in a world of complex systems means expanding not only time horizons and thought horizons; above all, it means expanding the horizons of caring."

15. Don't Erode the Goal of Goodness:

"Systems thinking can only tell us to do that. It can't do it ... but it can lead us to the edge of what analysis can do and then point beyond—to what can and must be done by the human spirit."

■ Detailed book summary of "Thinking in Systems: A Primer" by Donella Meadows including:

System Structure & Behavior
Why Systems Work So Well
Why Systems Surprise Us
8 System Traps & Opportunities
12 Leverage Points
15 General Systems Wisdoms
& More

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