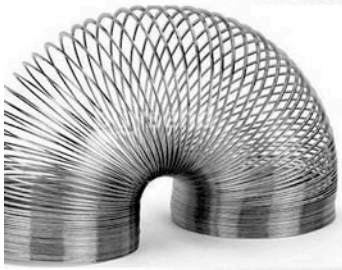
Introduction: The System Lens

Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes. . . . Managers do not solve problems, they manage messes.

—Russell Ackoff,[1] operations theorist



Early on in teaching about systems, I often bring out a Slinky. In case you grew up without one, a Slinky is a toy—a long, loose spring that can be made to bounce up and down, or pour back and forth from hand to hand, or walk itself downstairs.

I perch the Slinky on one upturned palm. With the fingers of the other hand, I grasp it from the top, partway down its coils. Then I pull the bottom hand away. The lower end of the Slinky drops, bounces back up again, yo-yos up and down, suspended from my fingers above.

"What made the Slinky bounce up and down like that?" I ask students.

"Your hand. You took away your hand," they say.

So I pick up the box the Slinky came in and hold it the same way, poised on a flattened palm, held from above by the fingers of the other hand. With as much dramatic flourish as I can muster, I pull the lower hand away.

Nothing happens. The box just hangs there, of course.

"Now once again. What made the Slinky bounce up and down?"

The answer clearly lies within the Slinky itself. The hands that manipulate it suppress or release some behavior that is latent within the structure of the spring.

That is a central insight of systems theory.

Once we see the relationship between structure and behavior, we can begin to understand how systems work, what makes them produce poor results, and how to shift them into better behavior patterns. As our world

Source: Meadows, Donella. (2008). Thinking in Systems: A Primer. Chelsea Green Publishing. Ed. Diana Wright