What is systems thinking?

Systems thinking offers you a powerful new perspective, a specialized language, and a set of tools that can be used in your everyday life and work. Systems thinking is a way of understanding reality that emphasizes the relationships among a system's parts, rather than the parts themselves.

Why Is Systems Thinking Important?

Systems Thinking can help you

- design smart, enduring solutions to problems
- achieve meaningful outcomes
- create desired futures

In its simplest sense, systems thinking gives you a more accurate picture of reality, so that you can work with a system's natural forces in order to achieve the results you desire. It also encourages you to think with an eye toward the long view—for example, how might a particular solution you're considering play out over the long run? And what unintended consequences might it have? Finally, systems thinking is founded on some basic, universal principles that you will begin to detect in all areas of life once you learn to recognize them (see Habits of a Systems Thinker).

What Are Systems?

A system is a group of interacting, interrelated, and interdependent components that form a complex and unified whole. Systems are everywhere—for example, the R&D department in your organization, the circulatory system in your body, the predator/prey relationships in nature, the ignition system in your car, and so on. Ecological systems and human social systems are living systems; human-made systems such as cars and washing machines are nonliving systems. Most systems thinkers focus their attention on living systems, especially human social systems. However, many systems thinkers are also interested in how human social systems affect the larger ecological systems in our planet.

Systems Thinking as a Perspective:
Events, Patterns, or System?

Systems thinking is a perspective because it helps us see the events and patterns in our lives in a new light—and respond to them in higher leverage ways. For example, suppose a fire breaks out in your town. This is an **event**. If you respond to it simply by putting the fire out, you're reacting. (That is, you have done nothing to prevent new fires.) If you respond by putting out the fire and studying where fires tend to break out in your town, you'd be paying attention to **patterns**. For example, you might notice that certain neighborhoods seem to suffer more fires than others. If you locate more fire stations in those areas, you're adapting. (You still haven't done anything to prevent new fires.) Now suppose you look for the **systems**—such as smoke-detector distribution and building materials used—that influence the patterns of neighborhood-fire outbreaks. If you build new fire-alarm systems and establish fire and safety codes, you're creating change. Finally, you're doing something to prevent new fires!

This is why looking at the world through a systems thinking "lens" is so powerful: It lets you actually make the world a better place.

Systems Thinking as a Special Language

As a language, systems thinking has unique qualities that help you communicate with others about the many systems around and within us:

- It emphasizes wholes rather than parts, and stresses the role of interconnections—including the role we each play in the systems at work in our lives.
- It emphasizes circular feedback (for example, A leads to B, which leads to C, which leads back to A) rather than linear cause and effect (A leads to B, which leads to C, which leads to D, . . . and so on).
- It contains special terminology that describes system behavior, such as reinforcing process (a feedback flow that generates exponential growth or collapse) and balancing process (a feedback flow that controls change and helps a system maintain stability).

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S**ystems Thinking as a Set of Tools**

The field of systems thinking has generated a broad array of tools that let you
(1) graphically depict your understanding of a particular system's structure and behavior,
(2) communicate with others about your understandings, and
(3) design high-leverage interventions for problematic system behavior.

These tools include the systems thinking iceberg, behavior over time graphs, connection circles, causal loops, and systems archetypes—all of which let you depict your understanding of a system.

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Whether you consider systems thinking mostly a new perspective, a special language, or a set of tools, it has a power and a potential that, once you've been introduced, are hard to resist. The more you learn about this intriguing field, the more you'll want to know!

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