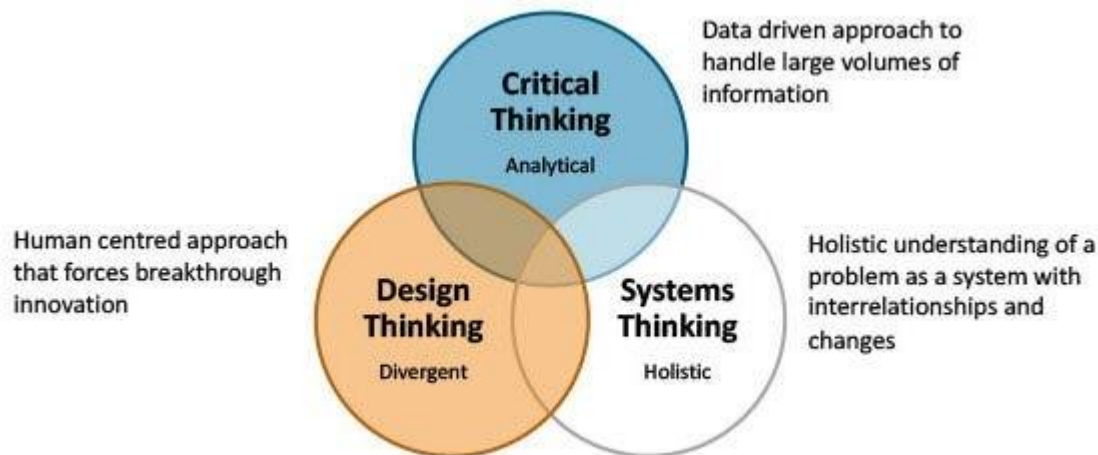


SYSTEMS THINKING AND ORGANIZATIONAL DEVELOPMENT: A PERSPECTIVE

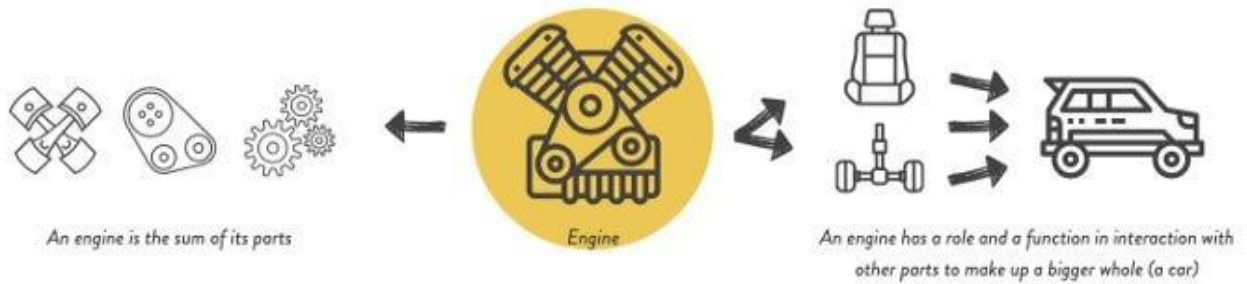
Shoury Kuttappa

Organizational development “refers to the context, focus and purpose of the change while **developing an organization.**” Additionally, one recent definition of organizational development states: “Organizational development is a critical and science-based process that **helps organizations build their capacity to change and achieve greater effectiveness** by developing, improving, and reinforcing strategies, structures, and processes.” In essence, good organizational change and development require a systems-thinking mindset and an interdisciplinary, holistic approach to tackling complex organizational challenges.



Systems Thinking has been gaining significant interest lately as a comprehensive approach to introducing organizational change and development. Through systems thinking, a number of core concepts and practical tools can be applied to better understand the complexity of each organization. There are many competing definitions of systems thinking in the academic literature. As Ross D. Arnold and Jon P. Wade point out in their recent article, “**Systems thinking is, literally, a system of thinking about systems.**”

Analytical/ Linear Thinking Vs Systems Thinking

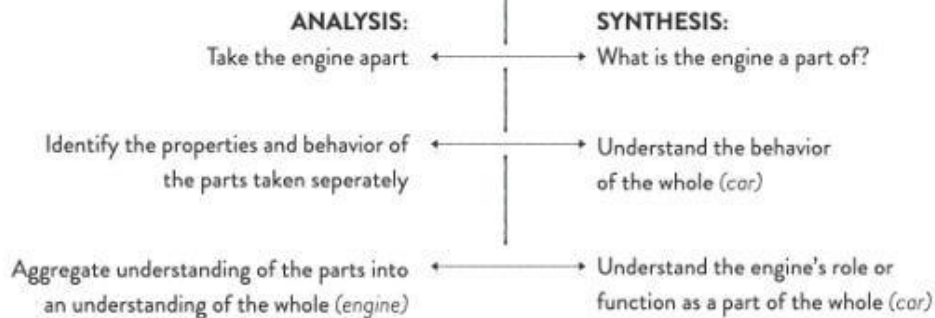


ANALYTICAL THINKING

Knowledge = **How** things works
Takes you inside the system to understand how it works.

SYSTEM THINKING

Understanding = **Why** things work the way they do
Takes you outside the system to explain why it works the way it does.



The Parts Of A System

Systems are made up of three parts: elements, interconnections, and a function or a purpose. The word "function" is used when talking about a non-human system, and the word "purpose" is used for human systems. The elements are the actors in the system. In our circulatory system, the elements are our heart, lungs, blood, blood vessels, arteries, and veins. They do the work. The interconnections would be the physical flow of blood, oxygen, and other vital nutrients through our body. The function of the circulatory system is to allow blood, oxygen and other gases, nutrients, and hormones to flow through the body to reach all of our cells.

An Example — The School (or) An Educational Institution

A school is a system, with the **elements** represented by teachers, students, principals, custodians, secretaries, bus drivers, cooks, parents, and counselors. The **interconnections** are the relationships between the elements, the school rules, the schedule, and the communications between all of the people in the school. The **purpose** of a school is to prepare the students for a successful future and to help them reach their full potential.

Unfortunately, some unintended behaviors can occur as a result of Organizational Change when the Systemic interplay is ignored. Consider the purposes of the actors in this system:

TEACHERS	• Pressure to earn good evaluations & merit pay based on test scores, which affects their job security
STUDENTS	• Pressure to avoid remediation classes or repeating a grade for the fear of disappointing parents & teachers if they perform poorly on tests
SCHOOL DISTRICTS	• Want to earn the highest grades to attract students
BUSINESSES & REALTORS	• Pressure schools to achieve high scores so that people will want to live and work in the community
COMMUNITY	• Wants an educated and well graded workforce to graduate from high school & college
LAWMAKERS	• Penalize schools who do not perform well by withdrawing funding and imposing sanctions.
PARENTS	• Want children to earn high scores, and to attend schools with the highest scores.
COMMUNITY MEMBERS	• Less likely to pass levies to increase school funding or support community schools if they do not think they are performing well enough.

In this system, the high-stakes nature of the tests cause **school districts** to put a lot of pressure on their teachers to teach to the test and base their evaluations on their test scores. **Teachers** feel the need to compete with one another to earn the highest scores, as well

as gain job security and an increased salary, so they no longer share ideas with one another and they may even cheat when administering the tests. **Students** feel a lot of pressure to earn high enough scores to be promoted to the next grade or avoid remedial classes, so they may cheat on the test.

A **government** may profess that educating children is a high priority, but if it slashes education funding, then clearly educating children is not a primary purpose of that government. **This was not the intention of putting these tests into schools**, and everyone agrees that those results are awful. Unfortunately, **if the sub-purposes and the overarching system purpose are not aligned and coexisting peacefully, a system can't function successfully.**

The Most Important Part of a System

Perhaps the easiest way to examine how a system's elements, interconnections, and purposes compare in terms of importance within a system is to speculate **how the system would be impacted if each component was changed one at a time.**

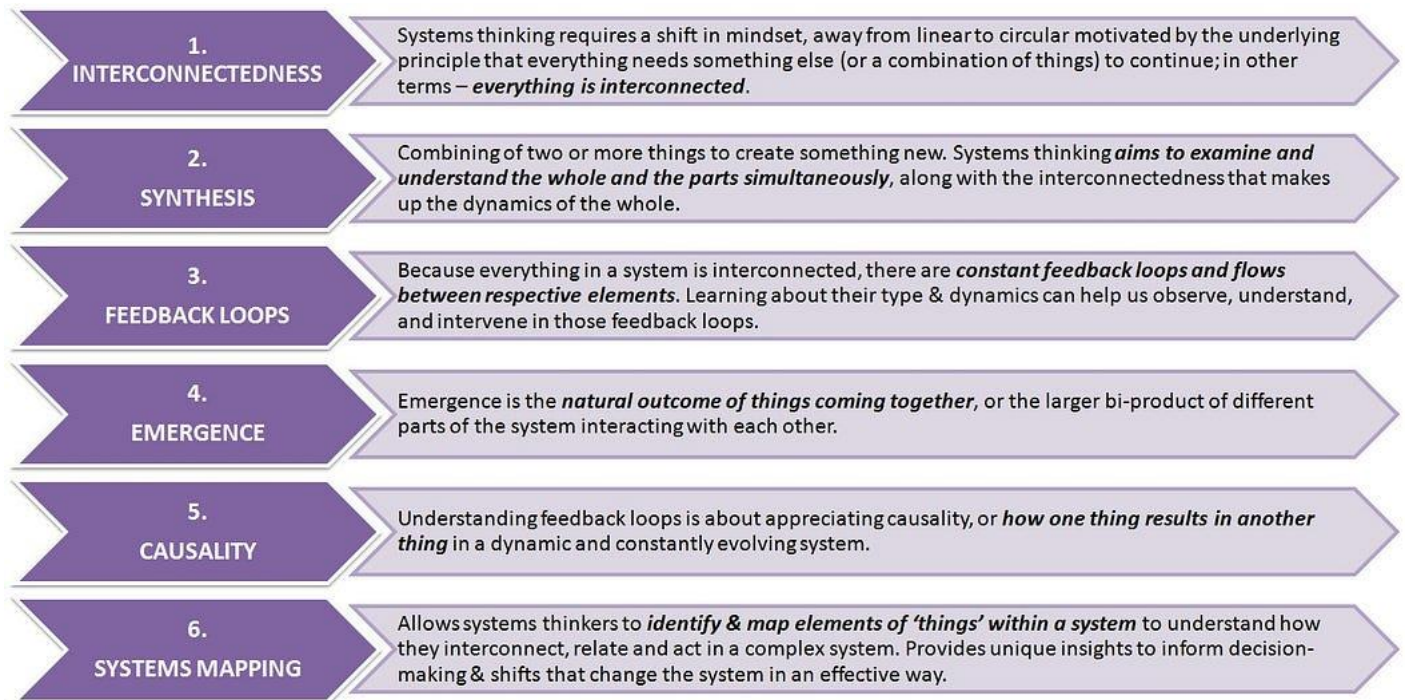
The least impact on a system is usually felt when its elements are changed. While certain elements may be very important to the system, by and large, if the elements are changed, the system can still continue to exist in a similar form and work to achieve its purpose or function. In a school, teachers, administrators, and other employees may leave, transfer, or retire. Students move away or may enter higher grade levels beyond the school. The elements may change, but the school is still easily identified as a school, and it still has largely the same objectives and sense of purpose.

Changing the interconnections of a system is quite different. **If the interconnections change, the system will be impacted significantly.** It may no longer be recognizable, even if the elements remain in place. Putting the students in charge instead of the adults in a school setting would undoubtedly change that system dramatically.

Changing a system's function or purpose also greatly impacts the entire system and may render it unrecognizable. If the school's main purpose is no longer educating children, but is now to make money by recruiting students to charge tuition, obviously the system is dramatically changed.

Every component of the system is essential. Elements, interconnections, and the purpose or function all interact with each other and each one plays a vital role in the system. ***The purpose or function of a system is often the least noticeable, but it definitely sets how the system will behave.*** Interconnections are the relationships within the system. When they are changed, the behavior of the system is also usually altered. ***The elements are typically the most visible parts of a system, but are often the least likely to cause a significant change in the system*** unless changing an element impacts the purpose or interconnections as well. Each part of the system is equally important as they work hand in hand, but ***changing a system's purpose has the greatest impact on the system as a whole.***

Six Themes Of Systems Thinking



Interconnectedness and synthesis relate to the dynamic relationships between various parts of a whole, ***the process of obtaining expected synergies between parts of the company.*** This includes the idea of circularity, which stresses the requirement of a mindset shift from linear to circular. Similarly, ***the concept of emergence relates to the outcomes of synergies that can come about as the elements of a system interact with each other in nonlinear ways.*** In the workplace, this often takes the form of the push and pull that happens due to organizational

politics and competing priorities. Organizational leaders with a systems-thinking mindset will see this as ***an opportunity for enhanced collaborations and innovation.***



1. INTERCONNECTEDNESS

- Systems thinking requires a shift in mindset, away from linear to circular motivated by the underlying principle that everything needs something else (or a combination of things) to continue; in other terms – ***everything is interconnected.***



2. SYNTHESIS

- Combining of two or more things to create something new. Systems thinking ***aims to examine and understand the whole and the parts simultaneously,*** along with the interconnectedness that makes up the dynamics of the whole.



3. FEEDBACK LOOPS

- Because everything in a system is interconnected, there are ***constant feedback loops and flows between respective elements.*** Learning about their type & dynamics can help us observe, understand, and intervene in those feedback loops.



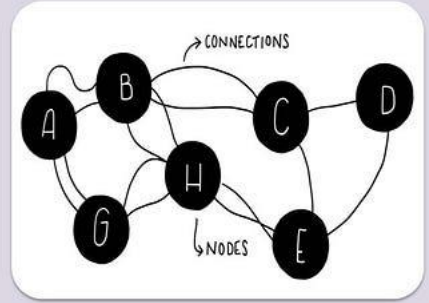
4. EMERGENCE

- Emergence is the *natural outcome of things coming together*, or the larger bi-product of different parts of the system interacting with each other.



5. CAUSALITY

- Understanding feedback loops is about appreciating causality, or *how one thing results in another thing* in a dynamic and constantly evolving system.



6. SYSTEMS MAPPING

- Allows systems thinkers to *identify & map elements of 'things' within a system* to understand how they interconnect, relate and act in a complex system. Provides unique insights to inform decision-making & shifts that change the system in an effective way.

Balancing and reinforcing feedback loops within an organization *serve as guidance for making adjustments as we learn more about the interconnectedness* of the elements of the system and their outcomes. Additionally, *causality refers to the flows of influence between the many interconnected parts* within a system. As we better understand the casualty and directionality of these elements, we will have an improved perspective on the many fundamental parts of the system, including relationships and feedback loops.

In the workplace, a skilled systems-thinking leader will ensure that mechanisms for multiple feedback loops are established and effectively communicated to their employees. Furthermore, they *will understand correlation versus causation* as they use the data gathered from the feedback loops to enhance workplace practices. Finally, systems mapping is a tool that systems thinkers can use to identify and visually map out the many interrelated elements of a complex system, which *will help them develop interventions, shifts, or policy decisions* that will dramatically change the system in the most effective way.

Ten Enemies of Systems Thinking

Some common thinking statements which act as obstacles to systems thinking may be:

"Let's fix it quick!"	• Jumping into a "solution" without fully understanding the problem
"Just put a band-aid on it and we'll come back to it later."	• It may only serve to mask the symptoms while the problem continues to infect the organization.
"We need the budget finalized before the end of the year!"	• Budgets cause us to make choices based on money rather than whether an idea is actually the best one.
"We must respond right away!"	• Panicking and trying to come up with an immediate solution
"Who cares?"	• Being apathetic instead of being curious, creative, and imaginative in searching for solutions
"We need more information."	• People have to be willing to examine the data, than just gathering it, and then be willing to act on it.
"You are overthinking things."	• Systems thinking requires us to stretch outside of our comfort zone, and not everyone welcomes that.
"Forget the rest of the organization, we have to take care of ourselves."	• Win-lose solutions vs win-win solutions.
"We don't want any conflict."	• Rather keep the peace at all costs, even if it is a hindrance to getting to the root of real problems
"We will do it this way."	• Positions of authority - imposing their individual will on the entire organization.

Systems thinking does not come easily to everyone. *Many find systems thinking to be a bit unstructured and unorganized* when they first begin to look at the world through this lens. It may be overwhelming and uncomfortable at first because *they become concerned about taking action when they don't know the effect that their suggested solution may have* on the system and its parts. Rest assured that this feeling is perfectly normal and will begin to ease over time as we reach deeper levels of understanding into the way systems behave.

The ultimate gain is the ability of organizations to be responsive to the changes in ecosystems and to be prepared to fine-tune and adapt parts of their organization on the fly. With this

understanding, systems' thinking provides clear benefits to organizations. ***It shows alternative directions for improvement*** with respect to the company's inner and outer connections. It gives a ***significant advantage in increasing the organization's capacity for change*** and, as a consequence, to fulfill the vision of business sustainability.

** Source Credits:

- The Art of Thinking in Systems, Steven Schuster
- Systems Thinking-Managing Chaos and Complexity, Jamshid Gharajedaghi