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"POSITIVE" SYSTEMS ARCHETYPES

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any readers of *The Systems Thinker* are familiar with the systems archetypes developed in the mid-1980s based on the work of Jay
Forrester, a prominent researcher and one of the greatest minds in systems thinking in the 20th century. Jennifer Kemeny, Michael Goodman, and Peter Senge identified generic patterns of behavior that occurred over and over

in different kinds of systems. There were eight original systems archetypes; two more have been added over the years. The archetypes include causal loop diagrams that depict the dynamic behavior that drives the problems and a set of strategies to address the issue using leverage points. Leverage points are actions that use the least amount of effort to produce the greatest

change in the system. These two aspects of archetypes—universality and strategies—make them useful for solving complex problems.

Below are summaries of these archetypes, including a description of the structure, the mental model that drives it, and a key strategy for dealing with it.

	Description	Mental Model	Key Strategy
Limits to Success	Success or growth is leveling off or declining.	"We'll get bigger and better by continuing to do more of what we are doing now."	Identify the limit that is causing the decline, then plan for that limit.
Success to the Successful	Decisions are being made in allocating resources, so that one party is getting attention and resources at the expense of another party.	"Because that person (depart- ment, project) is successful, they must be good and others are not."	Avoid win-lose situations in allocating resources. Find ways to make teams collaborators rather than competitors.
Tragedy of the Commons	Everyone is using a common resource that nobody owns. Overall usage goes up, but returns to individuals go down. Eventually, the resource may be destroyed.	"This resource belongs to me." Or "This resource is so vast that it'll never run out/collapse."	Identify the common resource and how people are drawing on it. Ther work with users to plan how to allocate and/or limit access to the resource.
Growth and Underinvestment	We neglect or are unable to invest in the capacity to succeed.	"We don't need to invest in capacity; we can get through the present crunch by applying greater effort. We can invest down the line."	Identify the limited capacity that is causing the heroic efforts. Recognize the unintended consequences of the current course of action, the plan to invest in capacity or to deal with the consequences of choosing not to do so.
Fixes That Fail	All the quick fixes we have tried have worked at first but the problem keeps getting worse.	"Time is money, and neither time nor money should be wasted. Therefore, the first answer must be the right one."	Identify the quick fix and understar how it has undermined a long-term solution. Take robust actions that solve the problem once and for all.
Shifting the Burden	We know the fundamental solution, but are unwilling, or unable, to take it, so we implement a symptomatic solution and deal with the side effects.	"We know what we need to do, but it's too difficult to deal with, so let's put on a bandage instead."	Identify the addictive behavior to the symptomatic solution. Then commit to implementing the fundamental solution, no matter ho difficult it may be.
Drifting Goals	We have lowered our standards to close the gap between the actual and desired performance.	"Our current level of activity is acceptable, even though it is below standard."	Identify the goal and how it has shifted. Recommit to or possibly redefine the goal. Then stay focused on the goal.

	Description	Mental Model	Key Strategy
Escalation	Each party sees the other's actions as a threat and responds in a way that threatens the other.	"We're under attack or being threatened, and we need to take action to defend ourselves."	Identify the threat, how it is perceived, and how it is escalating. Then stop reacting to the situation.
Accidental Adversaries	Each party is doing something that is undermining the other party's success.	"What that person is doing is preventing me from accomplishing my goal."	Identify each other's goals and see how they have put the two sides in an adversarial position. Then seek ways for both parties to accomplish their goals.
Attractiveness Principle	We are trying to be all things to all people.	"We must please everybody all of the time."	Identify actions you are taking to appease others. List your own goals, then make choices about what you will do and what you will not do. Stick to your decisions.

The "Positive" Archetypes

In 2000, we were testing our systems thinking approach with a group of people when Esther Wilcox Hudson, one of our colleagues, questioned the perspective from which the 10 archetypes operated. Esther noticed that they described a complex system from the perspective of what was not working—a pessimistic or negative focus. She felt that there was an important part of the system that was not being analyzed: the aspects of the system that were working —an optimistic or positive focus. From Esther's idea, we created a set of 10 positive archetypes that are counterparts to the original archetypes.

Archetypes are not actually negative or positive. The results that these

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archetypes produce are what you may define as either negative or positive. We use the terms negative and positive because that is what people in organizations are comfortable using. You can think of the negative and positive aspects of the archetypes as if they are two sides of a coin: one side is the positive form of the archetype and the other side is the negative form. Every system is in constant change. The system you are experiencing sometimes manifests its positive nature and sometimes manifests its negative nature.

For example, consider the "Tragedy of the Commons" systems archetype. In this structure, a common resource is being overused or depleted. In an organization, this resource might be the

IT department. When people from throughout the company call on IT to drop everything to help them with their computer problems, the IT staff ends up overworked and overstressed. Staff members may begin to leave the organization, making the problem even worse for those who remain.

The flip side of "Tragedy of the Commons" is "Collective Agreement." In this form of the archetype, people understand what it means to use a common resource. Access to the common resource is regulated in some way, so that all parties benefit and the common resource is sustained.

The 10 positive archetypes and their underlying mental models are described below.

"Positive" Archetypes					
	Description	Mental Model	Negative Archetype		
Plan for Limits	We identify, evaluate, and plan for limits.	"We can overcome limits by planning for them."	Limits to Success		
Strut Your Stuff	Decisions are being made in allocating resources to give appropriate attention to all parties.	"We can create win-win situations for everyone, including the organization as a whole."	Success to the Successful		
Collective Agreement	Everyone collectively agrees on overall use of a common resource.	"This common resource belongs to everyone."	Tragedy of the Commons		
Invest for Success	We take actions to invest in future capacity.	"Investing in the future is the key to success."	Growth and Underinvestment		
Fixes That Work	We identify possible side effects of short-term fixes.	"We consider possible alternatives and their side effects before acting."	Fixes That Fail		
Bite the Bullet	We are willing and able to invest the time and effort required to implement the fundamental solution.	"We take responsibility and spend the time and effort required to be effective, even if it's difficult."	Shifting the Burden Continued on next page		

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	Description	Mental Model	Negative Archetype
Stay on Track	We monitor, evaluate, and adjust performance standards in order to achieve our goals.	"We know where we are going and what it will take to get there."	Drifting Goals
Cooperative Partners	We work together and communicate openly for our collective success.	"There is always a way for us to work this out together."	Accidental Adversaries
Win/Win	All parties pay attention to their own behaviors.	"We can work this out, so that everybody wins."	Escalation
Be Your Best	We have boundaries of what we can and cannot do.	"We cannot please everybody."	Attractiveness Principle

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