THE JUNGLE TIMES PODCAST

HOW NATURE MANAGES COMPLEX SITUATIONS

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Musical Intro

How Nature manages complex situations

Hello. Welcome back to the Jungle Times Podcast. I'm your host Lawrence Poole. This is Episode #3 and it's called - *How Nature manages complex situations*.

On the last show, I explained Nature's *Survive & Prosper* law. I told you that it has no exceptions. I went on to say that - instead of thinking *survival of the strongest or of the most fierce* - we should adjust our perception to understand *survival of the wisest*... wisdom being the capacity to adapt to Nature's law.

I explained why Nature's management rule is *altruistic self-interest* and described the behavior we should adopt in order to Survive & Prosper.

I also said that to get it, you have to know that Nature manages one complex system by giving value to 3 aspects of it. They are – its *Structural capital, its Client capital and its Creative capital*. For the individual, these values represent *what we do, who we do it for and with, and how we do it*, our unique style. Lastly, I mentioned 3 kinds of people – Good, Bad, Stupid – who manage this complex world as a predator/prey environment.

Welcome to the jungle.

In this presentation, I'll explore how Nature manages complex situations, and I'm going to expose how complexity emerges from 4 conditions - Diversity, Connectivity, Interdependence and Adaptation.

There are many reasons why you'd profit from knowing this – to successfully manage your life, to take up the challenges we all face, to help solve social and financial discrepancies, to live more joyfully, to name a few.

I'll start by telling you that complex does not necessarily mean complicated.

Nature favors the very conditions that compose its complexity. The more a system has a diversity of parts, even if that might seem complicated, the more it is *robust*. As those parts connect and interact, complexity naturally increases but so does its robust character. When parts rely on each other or otherwise need each other, that contributes to an even greater complexity.

And of course, the more parts are free to choose how they adjust to changes in conditions or circumstances, well that might make the system complex, but it also makes it adaptive.

Think of a company with several branch offices or plants. There will be a lot of people working there, and they'll do a great variety of jobs. That diversity is an invitation to complexity. The company is interconnected so its employees are continuously communicating in one way or another. The parts rely on each other and, when the managers are free to adapt to day-to-day situations in their own way, that increase the possibility for disaster across the whole company.

Think about this in terms of an organization or society. The great variety of stakeholders involved in any undertaking is both its wealth and the very source of its complexity and resulting problems. As people connect and rely on each other, as they free to adapt, well this the recipe for complex situations.

Any family planning a summer vacation can appreciate how complicated variety of options can be. Parents, toddlers and teens have to satisfy different levels of need, a variety of hopes and expectations, a lot of interests and several levels of tolerance, so there's a real complexity of opinions, moods and behaviours to manage.

Traditional models of strategic thinking have major failings when it comes to dealing with complex situations. In an example, managers don't often take into account the effect of their decisions on all the stakeholders when they consider procedures or processes. The lack of physical access for disabled persons will quickly show you this.

Also - people tend to translate complexity into uncertainty. And we look for single outcome solutions, regardless of the circumstances

underlying a problem. You should know that most people never consider what a system *might become* as a result of their actions. And most of us feel compelled to justify and defend our mistakes.

The important idea here, is that Nature manages *the whole system* …rather than just its individual parts. For example, life is more than a diversity of chemicals, people are more than just tissue and organs, the economy is more than money or debt, and business is more than buying and selling. The whole is greater than the sum of its parts.

This idea that we are "parts of a whole" forces us to understand the whole as a complex system. Complexity occurs naturally when a situation answers 4 qualifications: *Diversity, Connectivity, Interdependence and Adaptability*.

In an organization, complex situations emerge when its diversity of participants – people with different skills, talents, abilities and job descriptions - comes together. They'll rely on each other to some degree and this adds to the complexity of the whole system because if one part misses a deadline for example, the fallback can have a domino effect on all the other parts.

If the parts of a system are free to learn and adapt, if they can act independently in response to local or global events, that tends to increase a situation's complexity.

Complex does not have to mean complicated. Complicated systems might have a diversity of parts and be connected in some way, but if they are not *adaptive*, complicated systems do not learn and then cannot self-correct. If they could, that particularity is would make them complex.

In any situation, the connection between people and their *perceptions* of how to adapt is what influences how events will play out. Studies show us that only 3-5% of people are visionary leaders who view change with positive anticipation and who adapt easily to new situations.

To understand visionary thinkers, consider Bobby Kennedy's famous words when he paraphrased Georges Bernard Shaw by stating: *"Some men see things as they are and ask 'why'. Others dream things that could be and ask: 'Why not'?"*

Visionaries are those people who see possibilities and potential when the majority of people do not. Somewhere between 5% and 10% of us are new paradigm pioneers. They quickly see what the visionary is proposes and, without resistance, they endorse that change and adopt it.

And then about 20% to 30% of individuals are a motivated mass of people who want change; they'll work for it and stand ready to adopt a good idea.

40% to 60% of people are the indifferent mass or what Richard Nixon called *the silent majority*. That many people view change with apathy. "*Tell me what you want, and I'll see to it… later… maybe… if I have time!"*

When they do adopt a new idea, it is most probably because a significant number of others already have. Lastly, only 5% to 10% of people remain non-adopters. They want nothing to do with change; they resist and fight it. They'll sabotage and terrorize others.

A proof in point is an organization called *The Flat Earth Society* who refuse to accept evidence that this planet is a sphere, not a flat disk as they claim. There is also an organization with members all over the world convinced that man never walked on the Moon; they believe the film footage was produced in Hollywood. Various religions see God as a bearded man on a throne somewhere who punishes bad people and rewards good ones; cults think human beings began in alien test tubes. And there are people who deny the Holocaust … and others who won't acknowledge Covid19.

Friends - there are conspiracy theorists for every historical event, and folks still believe that Rock and Roll is *"the devil's music*". Oddly, we are inclined to try and convince people who aren't interested that they should somehow change. But, as well you know, none are so blind as they who *will not see*.

Instead we should invest resources to encourage and support visionary thinkers and their new paradigm ideas. Unfortunately, the status-quo-committee is managed by status-quo-people who are against change.

Surrounded by an indifferent mass, visionaries and new paradigm pioneers are burning out. They try to improve things against resistance built into the system. Without proper support, creative people are merely voices crying in the wilderness.

Managing a simple situation means one that has predictable behaviors with few interactions and feedback. There is centralized decision-making, and power is concentrated among few participants. It's possible to change a part without considering how it affects the whole system.

Complex situations normally occur as a result of counter-intuitive thinking where decisions prove full of surprises - for example, not realizing that low taxes and interest rates lead to higher unemployment.

Decentralized decision-making makes simple situations complex. A large number of variables and many interactions cause delays, lacks, confused feedback loops and irrational feed-forward projections, and these contribute to destructive situations.

In many organizations, 5 major problems are known to cause simple situations to become complex. These are systemic in business culture - #1. Employees are bored, discouraged and/or generally unhappy; 2. Supervisors are under-equipped, and they over-supervise; 3. Turnover is very high; 4. Conflict, stress and tension are palpable; 5. Communication flows down, not up.

These problems can destroy essential aspects of structure. Complex situations occur when participants adapt according to their own notions of what is permitted. Unexpected outcomes emerge from unintended rules. Complicated targets and plans stifle adaptive abilities.

In a predator/prey environment, complexity thrives on tension and paradox. Here small changes can have huge effects and large changes can have little or no effect. It is argued that healthy organizations live on the edge of chaos – a region of moderate certainty and agreement. Beyond that moderation, complex situations engender complex systems. But complex systems are always made up of smaller, simpler ones.

Imagine how quickly problems could be solved, or projects completed, or needs filled, if everyone jumped up one category to transcend their own mindset. Imagine if the motivated majority took visionary risks and adopted new paradigm ideas or if a few of the silent majority got motivated.

Well - if that happened a genuine revolution would take place.

The only interesting question is this – What group do you belong to? Are you a leader? How quickly would needed changes in your life occur if you decide to jump up a category? How would your world be transformed if you were more open-minded, or more tolerant? What if you were less self-indulgent?

Think about it - *I'll be right back!*

INTERLUDE

Why should we learn how to manage complex systems? Well for one thing complex systems can withstand substantial trauma – that is to say, complex systems are more robust than simple ones. They are therefore more durable and sustainable. And complex systems can actually produce large events. So - if you can manage complexity, then you can influence larger events.

To understand how to manage a complex situation, describe it in terms of one of 3 kinds of landscape:

1. A simple problem can be compared to a Volcano landscape. Do a Google search for an image of Costa Rica's Arenal Volcano to see what I mean! You'll find a single mountain with a perfect cone. It's shaped like a triangle. Imagine the problem exposed along the base line, a length (A-B), and then the solution will appear at position (C) above the base line.

   The solution to a problem cannot exist at the same level of thinking as the problem, so climbing to position "C" allows you to see the whole problem. Because you see the whole base line when you climb to the peak of the Volcano, you can detail the problem as a length (A-B). From the higher position "C" you can see solution emerge.

   In any organization, the leader sits at the top of a pyramid. Simple problems can be understood as *volcanos* because all the input that explains the situation, and all the ideas about possible solutions to it, are within that landscape. The creative fire that maintains the volcano is also within, as are the climbers who can search for solutions. The leader can influence all the component parts, so – from the top - solutions are more easily explored, found and implemented.

2. If problems have more than a single contributing factor, they are considered to be complex and then cannot be seen as an Arenal Volcano landscape.

Complex problems have several bases and peaks and so they appear as a chain of mountains. Google the Talamanca Mountains in Southern Costa Rica to see what I mean. That range has peaks that rise more than 3000 meters in altitude and others - like the park we created at Mayamü - only reach 400 meters high and less as that chain falls into the sea. That complexity is called *a rugged landscape*.

Complex situations are like mountain ranges because they have a great many variables where each problem has baseline and a peak with several possible solutions. Mountain ranges also have a lot of inner fire and potential climbers who can reach those peaks.

A rugged landscape can be explored from both local and global peaks. A local peak describes any place in the landscape where a step in any direction needs an ascent in elevation too. Those kinds of decisions require creative solutions from local thinkers. A global peak is the highest point from which all the local peaks can be viewed. We actualize a mission, share a corporate vision or promote a national constitution from these higher elevations.

Rugged landscapes then have many local peaks to climb, and global peaks that may be difficult to isolate. We'll say that we couldn't see the forest for the trees to explain that sort of terrain.

Imagine a branch manager supplying the inner fire from his local peak, and a territory manager or an executive with the inner fire to climb a global peak. These different levels of thinking severely add to complexity.

3. When the interactions in a complex system are subject to sudden change, the system is called *a dancing landscape*. Think of a rugged mountain chain suddenly hit by an earthquake or a hurricane for example. Then everything will shake... and change.

Suzy and I experienced Hurricane Caesar in 1996. That tropical hurricane crossed Costa Rica from the Atlantic Ocean to continue as a cyclone on the Pacific side. We were at the center of it and saw rain in such volume that we couldn't see buildings across the street from our house for hours on end.

In this rugged landscape, the rain caused such widespread flooding, it badly damaged 51 homes while 213 more were washed away in mudslides. Also 72 bridges were destroyed, and 83 avalanches blocked our way from the hub city of San Isidro to the capital - San Jose, 90 miles South. 39 people were killed and 29 were listed as missing. Isolated for 5 weeks, we saw the landscape dance… and damage costing $151 million/US.

The Costa Ricans amazed me with how well they managed of a suddenly very complex situation. Every crisis was met with creativity. We were constantly informed and reassured. We lacked nothing and, by the time we were mobile again, and I went to survey the damaged landscape, I realized everything was already being fixed.

At the end of August, I told Suzy: "*You know… when tourists arrive in December, January and February, they won't even realize where the damage was.*"

Pointing to a gap in the horizon, I added: "*They'll never know there once was a mountain over there.*"

I saw how global change offers the opportunity to improve a whole system.

Managing complexity means dealing with both rugged landscapes and dancing landscapes. Many of the challenges force systems to adapt locally. Because the overall performance of a system is judged at higher elevations though, even if climbing a local peak is always the best immediate option, climbing a global peak is the most secure action overall.

In an easy example at an organizational level, consider how MacDonald's Corporation adapts to local markets. Their breakfast

menu in Costa Rica includes “Gallo Pinto”, a favorite local recipe for Rice ‘n Beans, whereas in the Philippines, you will find “Cheesy Eggdesal”, a Filipino favorite.

Those decisions were made at *local peak levels*. Both of those places offer the “Egg McMuffin” though… and that is a *global peak decision*.

In today’s world, most problems – the ecology, the economy, health needs, social unrest and the fight for justice - occur as *rugged landscapes*. These require local actions and global transactions, but bad and stupid people are also climbing those peaks and they keep moving the target.

While some folks are desperately trying to contain the Covid19 pandemic, for example, others are working to make things worse. They are making the landscape dance by promoting fake news and selfish views.

As difficult to manage as a rugged landscape might be, it is not impossible to do it well. Learning how to brainstorm a logic ladder will help you manage events as they unfold. You can work out many of the details as sequential events: *If they do A or B, we can counter with 1, 2, 3 - but if they choose C or D, then we can try 4 or even 5 and 6. Etcetera.*

Logic ladders allow you to plot out how a problem (+1) becomes a solution (-1). [(+1) + (-1) = 0]. Reduce then the problem to its simplest part and then code it with the value (+1). Not (+) in the sense of good but rather in the sense that “it does exist” – then you can see that problem abolished by adding to it, the value (-1), its perfect contraction so [(+1 + (-1) = 0].

This does give you a solution. It eliminates the problem and that allows a solution to emerge in the space created. For example – imagine a colossal problem called “war”. We eliminate war by adding to it its perfect contraction – peace. As simple as it may seem, the behavior involved in stopping a war is not the same that’s required to start a peace. Peace will emerge from the promotion of justice, security and tourism.

You can work out steps on the problem's base line so that the emergence of solutions has a greater chance of success.

Even if its variety of interactions make a landscape rugged, it's the unexpected that makes it dance. This can come from a spontaneous event like a Pandemic or from the actions of others A most intriguing insight is that dancing landscapes depend on the perspective gained from all the players climbing local and global peaks. Figure out who are the good, the bad and the stupid people, and what are they doing?

In those spontaneous event situations, "Game Theory" is the way to go. I strongly recommend that you download a little book called "Finite and Infinite Games" by James Carse. You can buy it on Amazon.com, but you can also download it as a free pdf. I'll put the URL with the description to the podcast.
(http://wtf.tw/ref/carse.pdf)

That book explains life as play and possibility while spelling out the rules of game theory.

It'll help you decide the consequences of your actions. In a complex system, it is crucial to distinguish whether a situation requires a local decision or if you must find a global solution. If are acting for the short-term or in a win-lose situation, you can play a *Finite Game*. But when your actions and decisions are part of the longer-term and must be sustainable, you should play the Infinite game.

If others have more influence, the only question of any real worth is - "*What game are you playing*?" Game Theory help manage those events that make rugged landscapes dance.

The path we choose to find a solution will depend on our perception, and how we code the problem. Nature doesn't deal with perceptions but rather with problem codes. When a problem has a limited few attributes, it is deemed simple. If it has a variety of attributes, it might be treated as a rugged landscape; if it is moving, it's a dancing landscape.

This insight should be used by every thinker and problem-solver: *How you see the problem – how you code it (whether it's simple, rugged or dancing) determines your approach to solving it.*

The attributes of a complex system are its diversity, its connectivity, its interdependence and its adaptability. It is interesting to note that more possibilities occur when these 4 variables are in a flux state, when they are moving.

On a scale where (1) measures a little diversity, connectivity, interdependence or adaptability and (10) measures a lot of them, things are most interesting at the *in-between states* where everything is flexible and can still move or somewhat adjust.

A system with little or none of these variables tends to remain stable for a time and then become entropic. The definition of *entropy* is the tendency for a system to change from a state of order to a state of disorder, from cosmos to chaos. I mentioned in my last podcast a situation I had to manage because - as *"Rust never sleeps!"* – my wheelchair collapsed from under me when I was deep in the jungle. It was stable for a time… but then chaos. You'll note that chaos never occurs at a good time.

Systems with too much diversity, connectivity, interdependence or adaptability tend to collapse. But in that interesting *in-between state*, there is a possibility of movement and systems produce new patterns where different structures and functionalities can emerge. This is why innovative solutions and empowering strategies can improve the whole system.

Complex systems can be made to «*Survive & Prosper*».

I'll be right back.

INTERLUDE

Nature manages complex situations by encoding them. As the component parts of a system are the cause of its complexity, problems can be seen as a Volcano landscape, a Rugged landscape or a Dancing landscape.

How you encode a problem determines the approach you will use to find and implement a solution.

I learned a lot about how Nature manages by observing the many, many species at Mayamü, our jungle reserve. It didn't take me long before I could actually predict the interactions that I saw *out there*, in the garden. Any good gardener will tell you that species can be made to work well with others and to benefit them. *Mutualism* is one of the ways Nature manages complex situations. It encourages species to help one another.

Farmers know that "*companion planting*" helps to increase crop yields, decrease plant diseases and limit pests. As complicated as the practice might seem to a city-dweller, when you partner with others to get positive results, you learn manage win-win-win scenarios Nature's way!

This is quite different from agri-business that relies on chemical fertilizers and insecticides. These harm plants and soil so there is a net loss to the whole system.

The win-win-win benefits of companion planting include ***Crop protection, Risk mitigation, Positive Hosting, Plant defense***. Crop protection means that tougher or more resistant plants like larger trees, can take the brunt of weather conditions to protect more delicate ones. Or, varieties that enjoy a lot of sun can shade those that are less tolerant. Companions can offer a natural protection in a harsh environment.

And we can mitigate risks**.** Things outside of our control like temperature and weather can harm delicate species, but we can increase our chances for success and make up for losses by growing more tolerant kind of plant too.

We can invite insects and birds to work the garden by growing their favourite things. Plants that produce nectar and pollen to feed beneficial insects, or seeds and berries to feed birds are positive hosts who keep them around to manage harmful pests.

The best offence is a good defence. We can protect plants that harmful insects love by growing them next to plants those same insects can't stand.

Managing complex situation needn't be complicated at all.

I've mentioned that *consciousness* emerges as an inherent part of organic molecules. This metaphysical aspect of life is what allows individuals and organizations to evolve together. We can willfully adapt to new conditions. We can learn to manage challenges by exploring what works and then copying successful behavior.

Nature manages by compelling species to adopt new strategies. Do or Die! I was forced to manage my "*within"* after the car accident that paralyzed me. As the saying goes – "*What doesn't kill you, makes you stronger."*

Species tend to organize themselves according to events and circumstances in their environment. In an article on how Nature manages itself, human factors engineer Randall Whittaker tells us: "*There is widespread interest in applying the theories of self-organization in Nature to the analysis and engineering of enterprise."*

By enterprise, Whittaker – who is a Doctoral Fellow at the University of Wisconsin - describes the range of human activity. He explains 7 ideas from studies in biology that apply directly to managing complex systems. These are the principles of *Self-organization, Self-configuration, Self-regulation, Self-steering, Self-maintenance, Self-reproduction* and *Self-reference*.

I added two more that specifically exist in human systems: *Self-awareness,* and *Self-empowerment*.

The 1st idea says *that every complex system is self-organized*. Self-organization describes the mechanism wherein order arises from the interaction between smaller, seemingly disordered, component parts. The organizing process can be spontaneous and not necessarily controlled by an agent outside of that system, or it can be much slower, and influenced by forces from outside.

In other words, when the conditions are right, complexity is organized, and a larger order emerges.... like magic. Some have called God *a Great Architect* but say what you will, the examples of self-organization are all around us: If yeast meets a watery soup of grains and sugars, presto! Alcohol is formed. When sperm meets egg - Bam! - a complex human life begins. As soon as Earth's atmosphere was conducive to sustaining life, life emerged - first as organic molecules, then a simple soup of bacteria and that slowly organized into increasingly complex forms - fungi, flora and fauna - and the latest arrival - *Homo sapiens*.

That notion allows us to see how an organic system's success is largely determined by its own character and behaviour, and how it reacts to circumstances and events, how it adapts to the *Survive & Prosper* law.

I'll use a termite nest as an easy example. Termites have existed for 50 million years... so they know what they're doing. With several million members in a colony, that society didn't suddenly emerge because the termites were running around wishing for it. The directives to organize itself, to build and maintain itself as a colony came from within. Individual members filled the needs of the collective by communicating them globally and answering them locally.

The more than 3000 species of termite on this Planet have adapted to a wide variety of conditions - from the most arid desert where temperatures reach a searing +50°C, to the wettest and the coldest forests below 0°C.

No one told them how to adapt to conditions... Each species, and every colony within that species, is a super-organism where every member contributes to assure group survival.

They manage themselves in a system where each nest is responsible for its own citizens. Everyone starts life as a worker, toiling for the common good, but some individuals graduate to other castes depending on group need - i.e. depending on circumstances and events. No one from outside of the colony tells them what to do.

This is one lesson most organizations have adpted. Since the 1940's, science has viewed enterprise as something more than the sum of its parts. Looking at its many activities, studies found that companies don't function as a distinct, passive and rigid entity.

They are dynamic systems. Their behaviour evolves in the normal course of operations. How a company evolves is determined by the enterprise itself, and by the individuals who are its creative capital, its inner fire. How an organization behaves, shapes its successes (...or not). It can ensure failure.

To succeed, it is in the best interest of every member of an organization to maintain open, constant and creative communications within and without the ranks. I see so many people in large company and government departments operate as in a silo, focused on its own tasks or operations alone, largely oblivious to the rest of the world that surrounds them. Of course, that's a recipe for disaster.

Similarly, some people have very little clue about how to communicate their needs to the larger whole. They are frustrated when their ideas are blocked or ignored by others and remain unfulfilled because of their own limits.

We can choose to be more creative or resist if we want - but why would we want that? Necessity may be the mother of invention, but Creator's INTENT is the father. Nature's principle of self-organization tells us that species evolve when their environment is appropriate for it, and they spontaneously extinguish when it's not conducive.

The action/reaction aspect of this tells us *how* life is organized and that gives us an amazing power. The principle says that if put in place

the conditions for being healthy, wealthy and wise... and then presto, we'll get lucky and inherit the fruit of our labour.

It's like magic ...but this organization does require good governance!

Nature's 2nd management principle says *every complex system is self-configured*. This means every system chooses its own constituent parts and adaptations. A good example is the Toucan. A rather large bird, it looks kind of awkward when it flies in a jungle because of its huge beak. Unless you know that Toucans don't really eat Fruit-Loops - rather they steal eggs from the nests of other birds, the decision to evolve that beak doesn't make a lot of sense.

Even if it makes them look awkward in flight, their beak is made of a hard plastic-like material, so when the Toucan dips it into a nest to steal an egg, all the protests and plucking defences put up by the irate parents won't dissuade it. The Toucan assured itself an easy source of protein far into the future with that beak.

Many organizations started in that same self-configuring way. They adapted as time went on, often becoming kind of unwieldy and awkward to manage. I remember Suzy and I helping a furniture company which had its beginnings in that same piecemeal and chaotic sort of way.

Started in field in the countryside in a metal Quonset hut, it grew and soon a manufacturing plant evolved. Extensions over the years transformed it into a chaotic mishmash of departments and manufacturing zones. When we met the owner, his company looked like a rough collection of knit-together pieces. It didn't even have an organizational flow chart.

After training the management team on strategic thinking, we guided them to imagine the ideal plant. Soon they fleshed out their list to architects who designed a new way of doing. The company banked its future on a brand new, state-of-the-art facility to better serve themselves and their customers.

In that same way, individuals adapt to the circumstances of life by choosing their response. How do you adapt? Choices like whether or not to attend a University or a Trade School depend on even earlier choices and the circumstances that shaped them. Did you crack the books?

Many people, hurt or damaged, choose to self-medicate with drugs or alcohol, or they'll practice other self-destructive behaviours - like risky sex – or they'll seethe in anger or hatred. Some sad folks are passive-aggressively trying to ignore life. Yes, everyone is somehow adapting to their life's circumstances and events. However way you adapt and whatever behaviour you choose, Nature is telling you: *Make your choices, and then inherit the consequences*.

Nature compels us to adapt and grow. A Bible verse sums it up nicely: "*When I was a child, I thought as a child, I believed as a child and I spoke as a child but when I became a man, I put away childish things.*"

Either you continue to manage yourself by linking up with your past and your old habits - or you can choose a new adaptation, one that leads to an ideal future.

As if to drive home the point, Nature's 3rd management principle says that *every complex system is self-regulated*. It is managed from an *"in here*".

My favourite example is the "Portuguese Man of War", a sort of jellyfish. Did you know that this creature is not a single organism? It's an organized system made up of dozens of individual animals from 2 species – *Polypoids* and *Zooids*. They live together in perfect synergy.

These critters are physiologically integrated as one animal to the extent that they cannot survive independently. The bulbous head is a sail-shaped structure filled with gas. It drags tentacles – some dozens of meters long – that are covered with poisonous barbs and that deliver a painful sting powerful enough to kill fish and even an occasional human being.

Feeding on fish and plankton, the Man o' War is like a trawler, dragging its venomous tentacles to trap and paralyze prey. It directs its catch to it a polyp that digests it and then redistributes the nutrients to the whole system.

Both species function as one. No one has compelled them to do this. They made their own decision based on mutual need. They decided to form a team, a collective. Those stakeholders decide how the organization is managed. And they agree to all the «who, what, where, when, why and how's» related to the day-to-day operations.

Some companies thrive in challenging times while others fail based on the *creative capital* managing the operation. Differences between success and failure come from management decisions. Organizations are self-regulated – they manage themselves.

Similarly - "I" make the decisions in regard to my own life. If I don't, I'm letting fate decide for me or I'm giving my power to random events and circumstances. Ready or not, a subjective "in here" is deciding how to manage your life decisions. Even if I had no choice about whether to hit that pole at 70 mph that caused my car accident, I did have a choice about how to react to it. And I chose to not cry over the spilled milk, to clean up the mess and carry on

Rather than react to circumstances Nature wants us to invest in our creative capital… and grow. That means learning to climb local peaks in order to solve simple problems, to scale global peaks so as to understand rugged landscapes and to work well with others if things start to dance.

The 4th principle of self-organization states that *every complex system is self-steering* - that is to say, each system manages itself with regards to an *out there*. A graphic example is the American Crocodile. Suzy and I have a training tour where take participants to its last natural habitat - the Tárcoles River in Costa Rica.

That river is among the most polluted waterways in all of Central America. A ferocious predator, the American Crocodile has successfully survived for more than 50 million years - but now it's

endangered because of conditions outside of its control. It has to steer itself through situations determined by the condition of that river.

The American Crocodile does not have the ability to put on a suit to go to downtown in San Jose and weal the political pressure that can assure its future. It must wait there, in a poisoned environment, until it dies…

The life-lesson I learned is this - even if you think that you control the conditions that determine your success and failure, do not ignore the larger world out there. Whether it's a corporate concern over competition or a worker trying to manage his or her own career, others are involved; there are good, bad and stupid people out there… and they keep very busy.

Ignoring the world around you is a mistake. It gives rise to an egocentric perception of reality that can blind you. And while some people seem to believe we are free to act as we please, fate always finds a way to remind us of our limits. I remember watching a large Canadian retailer politely planning to streamline his operations so he could share the market with an upstart American competitor. This while the American strategy was to dominate the market and crush its competition. I'll let you guess who won that trade war.

Consider how any simple things "*out there*" can cause a major problem "*in here*": *A snowstorm forced the meeting to be cancelled, and that postponed our signing a contract, which stopped a bank's promised credit extension, that forced the payroll to be missed, causing key employees to quit …and then the company failed.* A la Murphy's law, even if no one anticipated snow, things quickly became a perfect storm anyway.

Nature's 5th management principle states: *Every complex system is self-maintaining*. That is, systems tend to protect themselves… in continuity.

We'll call it self-preservation. Consider the Jaguar as an example. That cat claims a territory of 100 square miles as his alone and does not tolerate any other male cat hunting there. He'll fight challengers to the death, slaying them with a single bite through their skull into their brain.

He does allow a small number of females to use his territory though, but he expects them to mate in exchange for the privilege. Imagine an amorous weekend where they couple 40 or more times a day but then, afterward, he continues to live and hunt alone. Jaguars take that Survive & Prosper law very seriously and protect all the resources they need.

We'll see self-preservation every time someone gets caught with his hands in the cookie jar or whenever the doo-doo hits the fan. When shit happens, it seems everybody runs ragged trying to pass the buck. Many companies even hire crisis control specialists to manage the spin when something bad happens.

Often, because people don't want negative stain to reflect on them, they try to hide the real story. This is why out-dated ideas, old rules and misguided processes are protected... and become sacred cows. It also explains how bad laws remain on the books and why tyrants get into power... *by promising to protect us ...from us.*

In the same idea, note that the first priority of a committee is to *protect its mandate*. Jobs, funds, responsibilities and power all come from that mandate so it must be preserved at all costs. How many government programs - established for a time-limited purpose - still receive taxpayer funds many years after having outlived the cause? For a concrete example, take look at how personal income tax became a thing... it was a temporary measure taken in 1917 to pay for WWI.

Human systems are self-maintaining because people lie: *When you lie, you don't acknowledge the problem, so then there is nothing to fix.*

Politicians lie. Media lies… Humans lie often and about the most trivial of thing. We think lies protects us. Unfortunately, they only preserve the very systems we later rail against.

I spent many years promoting universal access issues for disabled people and I continuously ran into Catch-22. When I brought up a building's lack of wheelchair access to its owner for example, I'd invariably be told: "*Oh we don't see disabled people here…"* – Of course not, THERE'S NO ACCESS!!

In the sense that our quest is to self-protect - and by extension to protect our family, community, country or whatever else – we limit our potential for growth. Self- protection is a character trait that must be managed. It closely resembles *self-importance*… and that is our greatest enemy. By maintaining an ego-position wrapped around how we see today, ego is limiting a better future.

The 6th management principle says - *Every complex system is self-reproducing*. This means systems encourage, replicate or duplicate other systems similar to its own. I think women have enough experience trying to break through the glass ceiling to understand how the "old boys' network" is a subtle force in the business jungle.

In Nature, to prosper means to go forth and multiply. We see species go through extraordinary mating rituals in answer to that command. I'll use the Monarch Butterfly as an example because it has such a complex reproduction process. It undergoes a 4-step metamorphosis, starting as an egg laid by a female and sperm provided by a male, it then goes through 6 stages of larva to become a pupa, before emerging as a fully formed adult butterfly.

We answer the 6th principle with our sex drive. It seems to have paid off as we've taken over the world, becoming its dominant species. The same drive compels organizations to grow - to open branch offices, franchises and foreign territories. Companies want to globalize and become superorganisms. People want to prosper and grow families; we want to belong to a happy tribe and prosperous society.

We know that we can create more than children. Especially in this information age, our legacy can be co-creative instead of just procreative. What good ideas will you leave behind as your legacy? What recipe or what project will you be remembered for?

Creatures of habit, we tend to repeat what we know best. With this idea that you are self-maintaining, how often do you encourage, replicate or duplicate your fears and limits, projecting them on others?

Nature's 7th management principle tends to equalize things. It levels the playing field by saying: *Every complex system is self-referent - i.e. its character and behaviour are only meaningful with respect to itself!*

I think that we tend to take ourselves a little too seriously at times. It's good to recognize that no one else does. Nature's says a complex system only has itself as a point of reference. No one is objective.

In conferences and seminars, I'll often show the participants a picture of married couple fishing from a small boat on lake Arenal in Costa Rica. I know that they are quietly chatting, but it doesn't really matter what they're talking about. What does matter is that they have their back to a living, breathing Volcano that sits right next to that lake.

They can be discussing anything at all - about their plans to rule the world or their next billion-dollar deal - but it doesn't matter a flying fig if that volcano suddenly coughs up a lump of magma the size of Toyota. A sudden eruption and their discussion ends… as so does any thought of themselves in the grand scheme of things.

I've told people that the day after my car accident, when I was dying in the ICU, dying, I had things to do. I had a filled agenda and appoints with people. Destiny didn't give a flying fig about my plans! Karma can be a bitch.

Self-reference gives rise to our tendency to judge others in ways that put us in a better light - *I have strong character, you are loud and*

pushy; I was assertive, she was bitchy; w*e are good, they are bad; we are right, they are wrong*.

We'll be blinded by our self-serving beliefs. I've heard company CEOs who predicted results that could not be, leaders of countries promise victories that will never happen, and religious leaders speak about a Creator they do not know. This because, regardless of the facts, people tend to hold onto the opinions that suit them. To make the point, in our training Suzy and give leaders often a quest. Lost in the jungle, they must make critical decisions to survive. We promise that we'll reveal any information they need to solve their quest - *if they ask us for it*.

We'll then circulate among the participants and ask them if they have any questions. We are no longer surprised that managers … leaders … company executives - don't ask any questions. They jump into a fix-it mode without facts, only beliefs and opinions to guide them, and they fail every time. The loudest opinions win, decisions are made, and the group figuratively dies.

We then teach them a tool that helps them move beyond their self-referencing limit. If you remember, in my last Podcast, I said that we can question the unknown… until it reveals itself. They are surprise to see how quickly they arrive at a consensus and a favourable outcome.

The 8th principle of self-management in Nature is *self-awareness*. This is the notion that a complex system is conscious and aware of its own character, behaviour and circumstances. I like to use the Howler Monkey to drive home this idea, but it applies to every complex system.

The Howler Monkey reminds me that self-awareness belongs to more than humans. Self-awareness emerges with complexity, but I think you have to spend time with another species to appreciate its capacity to think intelligently and to feel. I'll limit my comments - but I suggest you watch animals being tested for intelligence on YouTube. It'll surprise you to see that chimpanzees recognize a reflection of themselves in the mirror, and they'll recognize others in pictures or on video. They are highly amused by cartoons and magicians. You

will also see a tribe of chimps who plan and wage war against a competitor that entered its territory; then you'll be convinced that they are very intelligent beings.

Scientists intent on measuring their intelligence have devised tests that show how some animals do even better than humans. Chimps have better short-term memory than we do for example, and wolves develop language skills that allow them to use group intuitiveness.

If we measure particular talents, I suggest the octopus might be more "self" aware than anyone you know. It can command the individual cells of its body to morph shape and change colour. It completely alters its "look" by shape shifting into an elaborate structure that looks like coral.

Self-awareness is a key ingredient to manage any organization. It allows self-correction. Corporations pay big money to consultants who guide them, and they'll use focus groups for the feedback that allows them to self-reflect. When you are aware of your strengths and weaknesses, you can plan strategically. You can capitalise your strengths and shore up your weakness.

This same logic applies to individuals, everywhere. If you are aware of your strengths and weaknesses, you can strategically plan. A successful entrepreneur will sell his strengths and buy his weaknesses. You can partner up with people and resources. You can add to your Structural capital, your Client capital and your Creative capital.

And this brings me to Nature's 9th management principle: *Species can self-empower*. That is to say, we can change our character, our behaviour and our circumstances. A good example is the Fly Orchid I described in the first Episode.

I told you that circumstances grew this flower on the forest floor where very little wind makes it difficult to scatter pollen. In answer, this flower evolved the look of a female fly. Not only did it change to attract male flies, it secretes a scent that mimics a female flies sexual

pheromones, guarantying they stop by …and pollinate it. In fact, its message is so powerful even bees and wasps drop by…

Nature wants us to empower our self and fix what ails us. As we see our limits, then we must surpass them. Nature expects to adapt by modifying our character, changing our behaviour and altering our circumstances so as to transcend our limits, challenges, handicaps. Power is a result of the process.

I've seen organizations that redefined themselves. Take IBM as an easy example. It is now in a 3rd incarnation. Founded in 1906, the company first made scales and then punch card tabulators. Later it built mainframe computers and calculators. Today it is best known for its software, and its consulting and IT services. IBM claimed its power by adapting when needed.

People can change too. I am not the same person I was before my accident. Mind you, I'm not the same person I was before grade school either. I have added power to myself. Nature expects every individual to « self » empower. There are no exceptions to the law.

I'll close by saying this: Nature manages complex situations by installing a system that compels individuals to climb to a position subjectively above the situation. Nine management principles compel every system to organize itself. *Self-configuration* allows the system to choose its constituent parts and adaptations. *Self-regulation* determines that a system must manages itself from "in here". This involves managing one's own thoughts, feelings and behaviors so as to reach goals.

Self-steering is where a system manages itself with regards to an "out there", a complex world. *Self-maintenance* triggers the "fight or flight" response but when used to protect one's Ego, it can be destructive. *Self-reproduction* is all about "*…going forth to multiply"* or to clone or to amass a fortune. *Self-reference* asserts that *"I am the boss of me…"* – at least until karma catches up with you.

The saving grace is the principle of *Self-awareness* – that's the feedback loop where we see ourselves in motion. *"I understand the*

value of my Structural capital, my Client capital, and my Creative capital."

Then, the 9th principle is *Self-empowerment* – which favours creative adaptation. *"I can change my circumstances by adding to my Structural capital, my Client capital and my Creative capital.*"

Folks, Nature is telling us that we have a duty to self-empower.

So… what is limiting you? You can change whatever it is. Whether your problem is simple one that can be plotted as a volcano landscape, or if it's complex and must be viewed as a rugged landscape, or if it's dancing, Nature deems that to solve it, you must rise above it. You must climb to the problem peak and there, let solution emerge. Heaven helps those who help themselves.

If your behaviour is self-sabotaging, get help. If the circumstances that surround your life are preventing you from reaching your highest potential… make a plan to change them. Head for the high ground. Climb your local and global peaks to survey your landscape. Nature wants you to thrive.

Thanks for listening.

Friends - I'll speak to you next time in a podcast called: *How Nature favours creative leaders*. Then, I'll explain how we are gifted to play 5 strategic roles.

If you enjoyed this presentation, please give it a positive review, subscribe to it and tell your friends about it. If you didn't, write and tell me why not.

Would like a transcript of the presentation? Just visit my website at www.TheJungleTimes.com and ask.

Thanks again… Adios for now.