

Herculean	Angela 20:28	剪影 20:17
JY 20:30	lost cause	let nature take its course 顺其自然
Hercules herculean	May 20:28	May 20:17
阿拉伯土著 阿拉伯土著 20:30	lost cause	let nature take its course
herculean	苗雅蕙 20:28	May 20:18
May 20:32	lost cause no hoper	let the chips fall where they may
push sb's buttons	剪影 20:28	
阿拉伯土著 阿拉伯土著 20:32	no hoper/ lost cause	
push someone's buttons	苗雅蕙 20:28	
JY 20:33		
push sb's button		

Too much of any one external factor can effectively kill a system. If you think about the narrow range of temperatures that humans can exist in, compared to all the possible temperatures that exist in our solar system, you can appreciate that significant change in external factors like light, air quality, etc. can devastate the stability of an ecosystem. So too with any business. External stability is important for overall success. Even if you can't control the external factors, you must pay attention to them. In order to have customers you need a

show me expressions that are synonymous with "let it be" "let nature take its course"

Certainly! Here are some expressions that are synonymous with "let it be" and "let nature take its course":

1. Leave well enough alone
2. Don't interfere
3. Allow things to take their own course
4. Don't meddle with it
5. Don't rock the boat
6. Let sleeping dogs lie
7. Don't try to force it
8. Don't push against the current
9. Don't swim against the tide
10. Let the chips fall where they may
11. Don't try to control everything
12. Don't tamper with it
13. Take a hands-off approach
14. Let things happen naturally
15. Don't try to manipulate the outcome

Certainly! Here are some more common expressions that share a similar meaning to "let it be" and "let nature take its course":

1. Roll with the punches
2. Ride the wave
3. Leave it to fate
4. Don't force it
5. Accept what comes
6. Don't swim against the current
7. Don't try to bend the rules
8. Let things happen on their own
9. Take a hands-off approach
10. Trust the process
11. Don't try to control the outcome
12. Allow things to unfold naturally
13. Don't try to fight it
14. Go with the flow
15. Don't try to fix what isn't broken

1. Que sera, sera (Whatever will be, will be)
2. Time will tell
3. Let the dust settle
4. Let things sort themselves out
5. Let fate decide
6. Let the universe decide
7. Let go and let God
8. Let the pieces fall into place
9. Let the wheel turn
10. Let the cards fall where they may
11. Let life take its course
12. Let the journey unfold
13. Let destiny take its toll
14. Let the puzzle solve itself
15. Let time work its magic



Outside Magazine declared the Race Across America the toughest endurance event there is, bar none	8
Wednesday, 4 April AD 2018	
...bar none	8
Tuesday, 16 January AD 2018	
...bar none.	8
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Riders average three hours of sleep per night—reluctantly.	8
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In 2004 he bested the number-two rider by eleven hours.	9
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I don't know about you, but my high school guidance counselor never told me that hallucinations, mailbo...	10
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To answer the big question of who makes it to the top, let's come at it from another angle: What makes a great leader? For years, academic research didn't seem able to make up its mind whether leaders even mattered. Some studies showed that great teams succeeded with or without a figurehead taking the credit. Others showed that sometimes a charismatic individual was the most important factor in whether a group succeeded or failed. It wasn't clear at all—until one academic had a hunch.

Winston Churchill should have never been prime minister of Great Britain. He wasn't someone who "did everything right," and it was shocking that he was elected. His contemporaries knew he was brilliant—but he was also a paranoid loose cannon who was impossible to deal with.

Churchill was a maverick. He did not merely love his country; he displayed a clear paranoia toward any possible threat to the empire. He saw even Gandhi as a danger and was beyond outspoken in his opposition to what was a pacifist rebellion in India. He was the Chicken Little of Great Britain, passionately railing against all opposition to his country, great, small—or imagined. But this "bad" quality is

In *Management Challenges for the 21st Century*, Peter Drucker, probably the most influential thinker on the subject of management, says that to be successful throughout your entire work life—which will likely span numerous jobs, multiple industries, and wholly different careers—it all comes down to exactly what Mukunda said: knowing yourself. And knowing yourself, in terms of achieving what you want in life, means being aware of your strengths.

Consider the people we're all envious of who can confidently pick something, say they're going to be awesome at it, and then calmly go and *actually* be awesome at it. This is their secret: they're not good at everything, but they know their strengths and choose things that are a good fit. Regarding knowing your strengths, Drucker says:

You can do this too: know thyself and pick the right pond. Identify your strengths and pick the right place to apply them.

If you follow rules well, find an organization aligned with your signature strengths and go full steam ahead. Society clearly rewards those who can comply, and these people keep the world an orderly place.

If you're more of an unfiltered type, be ready to blaze your own path. It's risky, but that's what you were built for. Leverage the intensifiers that make you unique. You're more

RULE 2: COOPERATE FIRST

All the successful programs in Axelrod's competition cooperated first. Givers outdo Matchers because they volunteer help without waiting to see what the other person will do. Plenty of other research backs this up. Robert Cialdini says that being the first to offer help is key to engendering a feeling of reciprocity, which is one of the cornerstones of persuasion and ingratiation.

In 2000, he and the other senior leaders of Pixar were all asking the same question: Was Pixar losing its edge? They'd had huge hits in *Toy Story*, *Toy Story 2*, and *A Bug's Life*, but they feared that with success the studio synonymous with creativity would grow, slow down, and become complacent.

Why do jerks succeed? Sure, some of it's duplicity and evil, but there's something we can learn from them in good conscience: they're assertive about what they want, and they're not afraid to let others know about what they've achieved.

Does it sound like I'm encouraging you to be a jerk? Hold your horses. We're just getting started. They do win in the short term. Now we need to hear the other side.

Sound too good to be true? Seligman repeated the study with 1986's baseball player quotes and again predicted achievement for 1987. Then he did it with basketball. This was no fluke. Optimistic explanatory style predicted success. (Bookies in Las Vegas, you're welcome.)

< What if you have a story that isn't working? You think you know who you are and what's important, but you're not happy or getting where you want to be. It might be time to play screenwriter and take another pass at the script that is your life. Therapists help patients do this in a process aptly titled "story editing." University of Virginia professor Timothy Wilson did a study in which therapists helped underperforming students reinterpret their academic challenges from "I can't do this" to "I just need to learn the ropes." This helped them earn higher grades the next year and reduced dropout rates. Studies show this can work as well as antidepressant drugs and, in some cases, even better.

Which raises questions: Why are games, which can be taxing, frustrating, and an awful lot like work, so much fun while our jobs, well . . . suck? Why do kids hate homework that's repetitive and incredibly hard but they'll gleefully run away from homework to play games . . . which are repetitive and incredibly hard? Why are puzzles fun but doing your taxes is awful? What is it that makes something a game and not just a frustrating pain in the ass?

Once you get into the working world, it's not all that different. As I'm sure you've suspected, successful people do work a lot of hours. When Harvard professor John Kotter studied top business leaders, he found they put in an average of sixty to sixty-five hours per week.

If you practice something one hour a day, that's 27.4 years to reach the ten-thousand-hour mark of expertise. But what if you quit a few less important things and made it four hours a day? Now it's 6.8 years. That's the difference between starting something at twenty and being an expert when you're forty-seven and starting at twenty and being world-class at twenty-seven. Famed researcher Walter Mischel credits his success to a Yiddish word his grandmother taught him: sitzfleisch. It means "buttocks." As in "Put your butt in that chair and work on what's important."

So what's the first step? Know your number-one priority. Then start quitting stuff that isn't as important and see what happens. You'll learn really fast if something really is more essential than you thought.

armchair quarterback (plural armchair quarterbacks) (colloquial, idiomatic, chiefly US) A person who watches sports on television, typically American football, who often verbally suggests plays or critiques the players and coaches.



wiktionary.org

https://en.wiktionary.org/wiki/armchair_quarterback

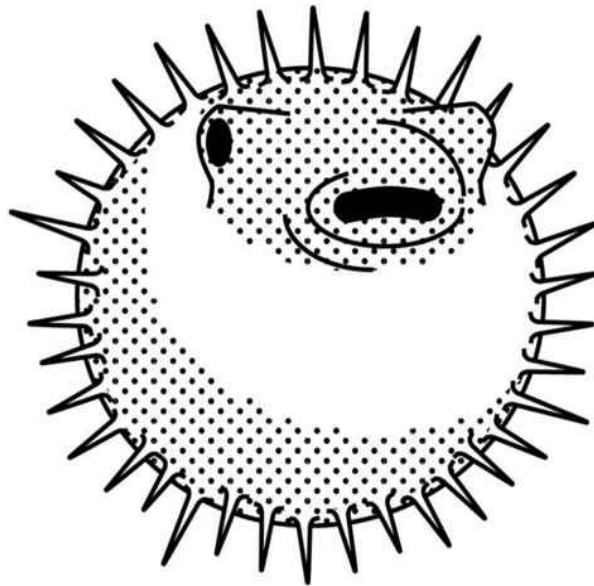
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About featured snippets • Feedback

Biology

Self-Preservation



—
Survive to thrive.

Self-Preservation

Pain = bad

Self-preservation or survival instincts are innate behaviors that all organisms possess for the sake of protection from harm. They are considered both fundamental and useful, and govern a lot of our behavior.

Surviving and thriving are very reliable human biological motivators. We all want to live with the best life possible. However, how each person responds to these driving forces is diverse among and within populations. [There is no universal human definition of a great life. Sometimes these instincts push us to reject the status quo, leading to new opportunities. And sometimes they hold us back, preventing us from realizing our potential. Knowing how to manage your self-preservation instincts can help you truly understand how to motivate yourself and others.]

Think of reflexes. These are involuntary, automatic actions that our bodies perform in response to a stimulus. For example, if you put your hand on a hot stove, a reflex will cause you to remove your hand right away even before a “hot!” message is sent to the brain. This reaction protects the body from serious burns. Blinking is another example. When dust or bugs approach the eye, the eye lid automatically closes without having to voluntarily contract any muscle to close the eye. These simple examples demonstrate that self-preservation is hardwired in. The better your survival reflexes, the greater chances of survival, and so these systems are easily selected for in the evolutionary process.

A more complex self-preservation instinct is the fight, flight, or freeze response in humans and other mammals. When human beings are faced with imminent danger, this mechanism kicks in with the mobilization of the sympathetic nervous system. The results in the body are a sharp increase in blood sugar levels, constriction of blood vessels, increase in heart rate, and the diversion of blood from nonessential organs to heart and skeletal muscles. These are responses that help the mammal deal most effectively with the situation they are in.

Sometimes the survival of a group can require the sacrifice of certain members. The survival of some species is contingent on sacrifices within the breeding process. This is known as kin selection and is a form of natural selection concerning populations, not individuals or individual lineages. Many species of animals only stick around because individuals have evolved to display completely selfless behaviors. If a behavior is beneficial overall for a population, despite its impact on the individual, it is likely to be selected for.

Just like human mothers, many animals are willing to go to great lengths to ensure the survival of their offspring and therefore their species in turn. Some will literally sacrifice their own lives, like the black lace weave spider, which will allow its babies to eat it. Some animals, like African elephants, zebras, and sea lions will work together in large groups to protect the offspring of others. Orcas and dolphins remain awake for a full month after the birth of their young to care for and protect them. Other animals, including polar bears and penguins, may go months without eating for the

sake of their offspring. Marmots will delay their own reproduction if others in their group need help with childcare.

Worker honeybees even completely neglect to reproduce so they can look after their queen's babies—and if they don't, the other bees destroy their eggs.¹ Once they become too old to be useful for foraging, the other bees will either kill the workers or refuse to let them into the hive, leaving them to starve to death. Drones, which are male bees, die during the mating process, having successfully passed on their genes. Any drones that don't manage to mate are likewise killed by other bees, so the hive does not need to waste resources feeding them. Bad for the individuals, excellent for the hive.²

From a natural selection standpoint, this makes sense because it ensures the survival of their own genes. Even in a herd, protecting the offspring of others makes sense because the animals in that population are likely to be at least distantly related or even immediate family. This has the long-term effect of selecting for altruistic genes and not selecting for selfish ones.

Other animals will end their own lives to protect their buddies. One species of ant, *Colobopsis explodens*, will explode when threatened by a predator, killing the individual but helping the group survive by releasing a poisonous substance. Bees and some types of termites behave similarly, attacking predators by destroying themselves.³ Belding's ground squirrels announce the presence of a predator through alarm calls that make themselves more conspicuous and therefore vulnerable.

Why are automatic reactions programmed in? The desire for survival seems a given, but it exists in organisms that don't have

anywhere near the size of cortex that we do. These widespread instincts exist without the ability to philosophize about them because the longer an organism survives, the greater its chances of passing along its genetics, and that is the ultimate point of evolution.

Humans are also, however, capable of overriding our own biological survival instincts. Sometimes it is innocuous, like when we go on a roller coaster. We tell ourselves it's perfectly safe, so the biological reaction of terror gets processed as a thrill. Sometimes, though, we override them because our situation seems to demand it, and we put ourselves in situations of chronic stress and pressure. (So self-preservation instincts are complex. The biological motivation is to ensure one's own survival, but not if it comes at the cost of the survival of one's own genes.)

—Sidebar: Territorial behavior

Territorial Behavior

A core component of self-preservation for all organisms is ensuring access to the resources necessary to survive. This manifests as territorial behavior. An organism or population's territory is loosely defined as the geographical region containing both the resources it needs to survive and the mating opportunities needed to ensure the survival of its species.¹ Only the areas that an organism makes an active effort to defend count as its territory, as there may be additional areas where it also lives.

For an organism to maintain its territory, it must compete with other species, or with other members of its own species. Some animals use scents to mark out their territory, as a warning to others to stay out. Others release unpleasant chemicals or make visible markings. Some actively guard their area, attacking any intruders. Others, birds in particular, use threatening calls.

Maintaining a territory often requires a great deal of time and energy, which is always a signal that a trait confers some serious survival advantage. Territorial behavior is not necessary if resources are abundant and organisms will generally cease to engage in it over time if this is the case. The scarcer resources prove to be, the more aggressive the territorial behavior is likely to be.

Self-preservation means more than survival

At first glance, self-preservation seems fairly straightforward. You run from a suspicious-looking person on the street. You fight back against a bully. You freeze when your boss yells at you for the fourteenth time in one day and you are too vulnerable to do anything else. We choose fight or flight when we think we have a chance to succeed. Freeze mode usually takes over when the accumulation of stressors is so great that we can no longer really function. By freezing we hope to preserve the little life we have left. The drive for survival is deeply ingrained in our behavioral responses.

How then do we understand people who risk their lives for a cause? What propels someone to put their immediate survival in jeopardy in support of a possible future?

Gioconda Belli^{*} was not an obvious choice to join the Sandinista revolution in Nicaragua in the 1970s. She was married with two young daughters. She came from an upper-middle-class family and had a decent life under the Somoza dictatorship that had been in power in Nicaragua for 40 years. However, she didn't like the oppression, corruption, and poverty she saw in her country. She sought political and social change and concluded that joining the revolutionary Sandinista organization was the best way to achieve it. In her memoir, *The Country Under My Skin*, she writes that she knew "joining the Sandinistas was a risky proposition. It meant putting my life in the line of fire."⁴ From the beginning of the Sandinista movement, suspected revolutionaries were arrested and tortured by the Somoza dictatorship. As the revolution

progressed, there were horrific accounts of the measures the regime took to suppress the revolutionaries, including throwing people to their deaths from helicopters.

Deciding to face potential torture and death seems to be the opposite of self-preservation. Belli deliberately and knowingly put her life at risk to try to achieve political and social change that was far from guaranteed. Self-preservation is such a useful model because it helps us understand seemingly counterintuitive actions: sacrificing short-term guarantees for long-term possibilities, like the animals we looked at who sacrifice themselves for their offspring or their group.

Belli was not fully committed to the revolution right away. She had moments of doubt, both about the Sandinista organization and the wisdom of putting her daughters in a position that they might have to grow up without a mother. She quotes a friend of hers trying to help her reconcile being a revolutionary with being a mother: “Your daughter is precisely the reason you should do it,” he said. “You should do it for her, so that she won’t have to do the job you are not willing to do.”⁵ In a sense Belli was motivated by trying to create a world for her daughters where they would not have to make a similar sacrifice. We can understand it like deferred preservation: a more equitable and stable world would give her genes the best possible chance of carrying on.

It’s important, however, not to frame her choice simply in terms of calculated biological preservation. When she was contemplating committing to the Sandinistas, Belli explains that she saw participating in the revolution as her “only way into a more meaningful existence.”⁶ There is a nuance here: that for humans

survival is not merely a binary like dead/alive. We don't want to just continue breathing, but to have a life that we perceive as having meaning, value, or at least a point.

Working with the Sandinistas was perilous. Belli writes of being followed, interrogated, and exiled to neighboring Costa Rica after having been convicted by the Somoza government of being a traitor. She spent a lot of time separated from her children and went through personal turmoil as she tried to navigate two marriages that failed under the pressure of her activities. Watching many comrades jailed or killed, she writes of being afraid that “so many dreams and efforts might be wasted.”⁷ Belli was, however, driven by the desire to stop the actions of the Somoza regime that kept so many Nicaraguans poor and desperate while the leaders lined their pockets with international aid money. She explains: “At twenty-four, I was a citizen of a terrible, destitute country, but no misfortune seemed eternal to me. I was sure we could change everything and build a bright future.”⁸

Working with the Sandinistas meant joining a tribe of sorts. Belli explains, “I understood how strong the bond between those of us who were in the struggle was.”⁹ Therefore, individuals were prepared to take actions that put their own lives at risk in order to increase the chances of survival of the group. Belli writes of the many times she smuggled guns, money, and fake identification across borders bringing them to others in the revolution, jeopardizing her own freedom in order to help the Sandinista movement.

Belli admits to questioning the desire of people to put the group first. “Were we all mad?” she writes. “What mystery in human

genes accounted for the fact that men and women could override their personal survival instincts when the fate of the tribe or collective was at stake?”¹⁰ What makes us take a risk on an uncertain future instead of sticking with guaranteed immediate survival? Belli herself offers an interesting perspective when she explains how she pushed through the setbacks and stress of exile: “If I gave in to fear, I would end up killing my soul to save my body.”¹¹ She also writes of explaining to her children “the obligation to be responsible to other people,”¹² to be responsible to the group.

The Sandinista revolution was successful in that it successfully removed Somoza from power in Nicaragua. With the dictatorship gone, the Sandinistas tried to rebuild the country’s political and social infrastructure based on the ideals they had developed and refined as a revolutionary organization. Belli’s main contributions to the ultimately successful revolution were in communications and public relations. She wrote press releases and recruiting letters, trying to explain the goals of the Sandinistas and recruit people to the cause. She traveled abroad many times to represent the movement and gain international support. But she explains that “Sandinismo was a fundamental element of my identity,”¹³ which propelled her to take whatever action necessary to support the group. As the revolution approached she continued her efforts from her exile in Costa Rica, “but I was anxious for the moment when I could join in the one, most basic contribution to the struggle: combat in Nicaragua.”¹⁴ Very often, her course of action had her saying goodbye to her children as if it could be the last time she saw them. But she did it anyway. Her self-preservation

instincts were focused on doing everything she could to see her children grow up in the world “safely and happily.”¹⁵

—Sidebar: Permanent Record

Permanent Record

We humans preserve ourselves not just through the genetics that we download into our offspring, but by preserving a record of who we are. Around the time that humans first started writing, we began to keep the most permanent records we could in libraries. Almost immediately we decided that it wasn't enough to record, but far more important to preserve our records. The knowledge that we have captured over millennia allows us to leave a legacy of remembering who we are.

In 1849, Austen Henry Layard found Nineveh, an ancient Assyrian city that had once been the center of a civilization. It had been completely destroyed by fire in 612 BCE, and in the intervening millennia had been reduced to fiction. The destruction by fire, however, had an extremely valuable side effect: it had preserved the clay tablets that were contained in the city's remarkable library. The city's last king, Ashurbanipal, had collected texts from all over Mesopotamia, so the library was full of tablets chronicling not only Assyrian life, but Sumerian and Babylonian as well. Finding the library brought to life people, cities, and customs that had disappeared from history.¹ The "library contained dictionaries and grammars, treatises on botany, astronomy, metallurgy, geology, geography, chronology, tracts on religion and history, and a collection of royal edicts, proclamations, laws, and decrees."²

The find gave us more context to understand human history. A tablet was discovered that chronicled a flood story

similar to the one found in the Bible, but from centuries earlier. Another find, the Law Code of Hammurabi, provides insight into cultural norms that influenced later civilizations. Knowledge like this helps to trace, with more and more comprehension, the story of humanity. Without what is contained in libraries, we would have had to reinvent and reimagine everything all of the time. Preserving knowledge allows us to transfer it more easily, supporting the preservation of the species.

Derinkuyu: Turkey's ancient underground city

It may be a myth that ostriches bury their heads in the sand, but during times of danger, humans have often looked beneath their feet for safety. During the Great Fire of London in 1666, people buried valuables in their gardens. The Dead Sea Scrolls were found underground in a cave. And in the Central Anatolia region of Turkey, a number of persecuted groups over the course of thousands of years moved their lives beneath the ground in a move that illustrates the incredible lengths we will go to for self-preservation.

Derinkuyu is the deepest of the cities yet discovered beneath Cappadocia. In 1963, a Turkish man renovating his basement found something astounding: an entire room behind its wall. From there, archaeologists discovered a whole city snaking beneath the ground, carved into the soft yet sturdy rock.

Descending 200-280 feet underground, it has 18 different levels capable of housing as many as 20,000–30,000 people at a time. Future excavations may find it to have been even bigger than that.¹⁶ Derinkuyu is far from just being a maze of tunnels to huddle in and wait for danger to pass. It is a complete city, containing everything its residents needed to comfortably thrive for a while, not just survive. Archaeologists have uncovered schools, areas for worship, bedrooms, bathrooms, areas for storing food and equipment for making olive oil and wine, tombs, stables for horses and other animals, and community meeting spaces. In addition to fresh food and water, the residents had fresh air from above through at least 52 shafts that kept the city well ventilated.¹⁷

Some experts attribute the construction of Derinkuyu to the Phrygians, an ancient race of Indo-Europeans from the southern Balkans who migrated to the area in the 12th century BCE, according to accounts by the Greek historian Herodotus. The Phrygians may have built it to hide from the Assyrians. Derinkuyu could also be the work of the Persians or the Hittites. Historians have suggested that the Hittites may have dug tunnels for storage before other groups turned them into cities.¹⁸ Alternatively, the Hittites may have sheltered in Derinkuyu during their 12th-century BCE war with the Thracians. Romans, early Christians, and Turks all used them at various points. Some go as far as to claim they are prehistoric, first dug as protection from the heat, due to the discovery of 10,000-year-old stone cutting tools in the area. The variation in the quality of the tunnels lends support to this theory.

Regardless of who dug the first tunnel, subsequent groups expanded upon and advanced Derinkuyu to the extent that it is hard to view it as the property of any single group. Derinkuyu belongs to the region.

We don't know, and may never know, exactly which group of people created Derinkuyu in the first place. But it's clear why they did it. The region of Anatolia has spent much of its history in a stew of conflict and uncertainty. Its position between Asia and Europe made it an appealing target for major world powers who have, again and again, sought to control the region. For the residents to survive the endless wars and confusion, they needed to take drastic action. Derinkuyu and the other underground cities in Cappadocia have repeatedly saved the area's residents from extinction. During the seventh century, the Persian Wars took place in Cappadocia,

tearing the region apart. That conflict was scarcely over when Muslim Arab armies arrived and caused a complete civil breakdown.¹⁹

Based on its design, Derinkuyu was intended to provide protection during conflict, like a turtle retreating into its shell. The tunnels were narrow enough to require walking along them in single file, hunched over. This would have prevented attackers from moving into Derinkuyu, as the residents could easily pick off soldiers emerging one by one from tunnels. Huge carved stone disks weighing eleven hundred pounds rolled in front of entrances when the residents wanted to prevent anyone else entering, with small holes in the middle which may have allowed arrows to be fired through.²⁰ Derinkuyu even had a tunnel, based on preliminary excavations, stretching several kilometers to another underground city. If its defenses were somehow breached, the inhabitants could hastily take refuge elsewhere.



When we feel threatened, flight is often a first response. We want to get away from the danger and hide. The people who sheltered in Derinkuyu and other underground cities in the region did so because it put them in a situation where they had maximum leverage. They had everything they needed to survive in relative comfort for long periods of time. Even if any attackers did manage to get into Derinkuyu, they could only do so one at a time and were easy to defeat.

The strategy of fleeing and hoarding worked well for the residents of Cappadocia, but this self-preservation response can backfire. Hoarding supplies beneath the ground may have made sense for them in the short term. While there is much left for

researchers to learn about Derinkuyu, it seems unlikely that people could have remained entirely underground in the long-term. They could only store so much food, and over extended periods of time would have suffered serious vitamin deficiencies from the lack of sunlight or fresh food. If their enemies had decided to start a siege, it wouldn't have worked so well.

An underground city is a vivid image, but the ways the same impulse can influence our behavior can be less obvious. Acting in survival mode is not sustainable long-term. Hoarding and hiding are not lifelong strategies. As humans, we're always on hair trigger to hoard at the slightest sign of scarcity, even if doing so ends up worsening that scarcity. If people at a company fear impending layoffs, they may make like the residents of Derinkuyu and metaphorically hide away from everyone else, hoarding information. They feel that keeping all the information to themselves makes them more valuable to the company. They might hoard work, refusing to delegate and taking on irrelevant responsibilities. It might make them indispensable in the short term, but in the long-term trust breaks down and less work gets done, putting the company, and thus their job, at risk. In reality, this self-preservation instinct has the opposite effect. Not helping others or sharing the leverage is worse for everyone.

Any time we're fighting to preserve ourselves in an emergency situation, we need more of a concrete plan than hiding and hoarding. In addition to our natural instincts, we need to move beyond our evolutionary programming and consider how we can survive long-term. Sometimes our immediate self-preservation

long-game

格局

→

X2

instincts can backfire, putting us in situations of little long-term benefit.



Conclusion

Self-preservation is a core instinct that explains many of our actions including why we are highly sensitive to situations of scarcity, why we try to increase our value at the expense of our organization, and why we make sacrifices to ensure legacy.

Our notions of self-preservation are tied into our identities and a way to give meaning to our lives. If my children or my ideas survive, grow, and multiply, I have, in a sense, preserved myself.



THIS IS YOUR
DO WHAT YOU LOVE,
AND DO IT OFTEN. **LIFE.**

IF YOU DON'T LIKE SOMETHING, CHANGE IT.

IF YOU DON'T LIKE YOUR JOB, QUIT.

IF YOU DON'T HAVE ENOUGH TIME, STOP WATCHING TV.

IF YOU ARE LOOKING FOR THE LOVE OF YOUR LIFE, STOP;

THEY WILL BE WAITING FOR YOU WHEN YOU

START DOING THINGS YOU LOVE.

STOP OVER ANALYZING, ALL EMOTIONS ARE BEAUTIFUL.

WHEN YOU EAT, APPRECIATE

LIFE IS SIMPLE. EVERY LAST BITE.

OPEN YOUR MIND, ARMS, AND HEART TO NEW THINGS

AND PEOPLE, WE ARE UNITED IN OUR DIFFERENCES.

ASK THE NEXT PERSON YOU SEE WHAT THEIR PASSION IS,

AND SHARE YOUR INSPIRING DREAM WITH THEM.

TRAVEL OFTEN; GETTING LOST WILL

HELP YOU FIND YOURSELF.

SOME OPPORTUNITIES ONLY COME ONCE, SEIZE THEM.

LIFE IS ABOUT THE PEOPLE YOU MEET, AND

THE THINGS YOU CREATE WITH THEM

SO GO OUT AND START CREATING.

LIFE IS LIVE YOUR DREAM

AND SHARE

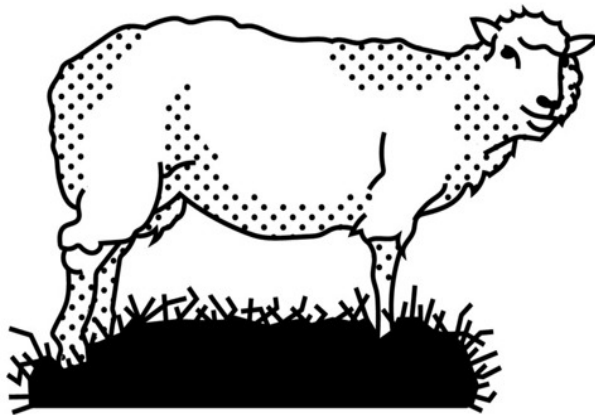
SHORT. YOUR PASSION.

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Biology

Replication



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Replication

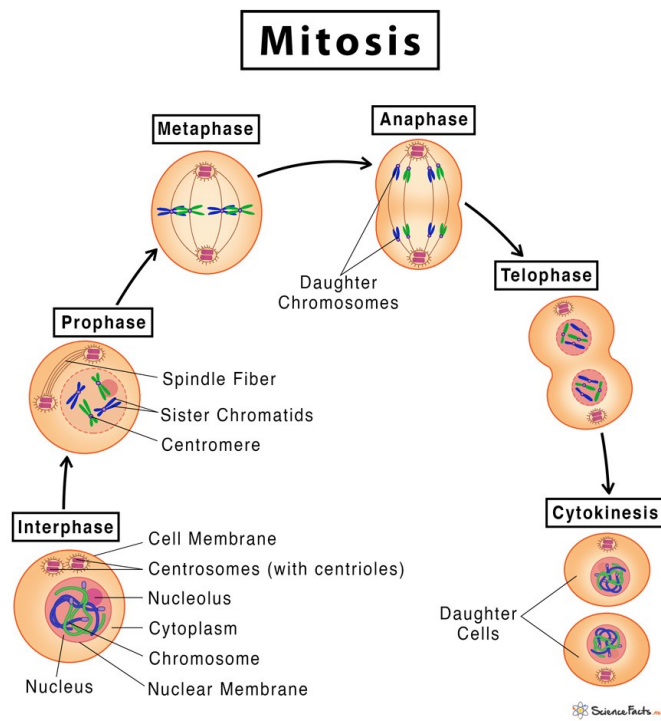
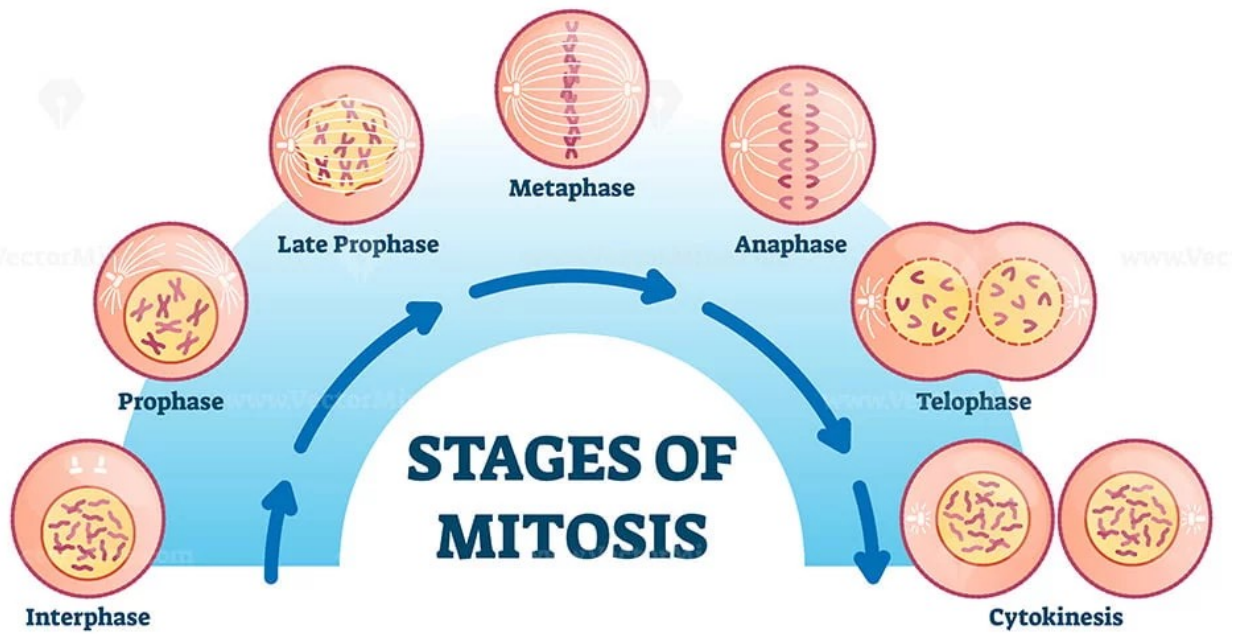
Replication in biology is ultimately about the ability of DNA to make a copy of itself during cell division. This is how we start life, and it is a process that continues in some of our cells until our death.

Let's think about this process at the small level: cell replication. Our skin cells flake off by the millions every day, yet through our lives we never run out. That's because there are skin cells making copies of themselves all the time. This ability to make perfect copies is built into their structure, and without it we wouldn't last very long.

This type of replication is called *mitosis*. It refers to the entire process of replication of nonsexual cells, the result being two genetically identical daughter cells. Mitosis is the process that gives us more skin, more hair, more nails. This replication is far from mysterious and can be conceptualized as having certain basic requirements.

« In an adapted unit, most variation introduced by errors (mutations) in copying are harmful.

For an adapted entity, therefore, increasing fidelity in copying, or mechanisms that concentrate error in parts of the code where they will be least harmful or most helpful, will be favored. »



Geerat Vermeij¹

You need three things for replication to occur:

- ↳ 1. A code that represents what you wish to replicate,
- 2. A means of copying this code,
- 3. And a place to process the code and construct the replication.

This is how our skin cells are constructed. They possess a code of themselves, a mechanism to copy the code, and a place to execute the code—all to produce more skin cells. Furthermore, this replication machine is phenomenal. We never run out of skin.

Replication is useful beyond skin cells. It has another amazing property—combination. Replications don't have to be exact copies. The components of cells can be combined in new ways to give us unique instances of existing things.

This is sexual reproduction, and it creates new opportunities. Called *meiosis*, a sex cell contains a copy of half a female's chromosomes and is combined with half a male's chromosomes to produce a new whole. The offspring of these parents are genetically unique due both to having two sources for their genes and from variation that occurs in the copying.

Sexual reproduction is prevalent all over the biological world. Mammals, fish, and plants all partake. Why? Because, over several generations, a lack of sexual reproduction means less genetic variation, which leads to fewer options when the environment changes. And if you can't adapt to a new environment, you die.

→ [Replication, then, is what allows for diversity in traits that can improve fitness and increase the chances of survival. Exact copies perpetuate bad mutations. The power of replication

combination prevents the accumulation of traits that impair fitness and lets us, as a species, try out new behaviors that can be super beneficial] Of course, there is a significant cost. → We have to work hard to find another half with which to combine and not be intimidated by the diversity that might offer the best chance of producing successful adaptations.

Keeping it all in the family

When we have replication without diversity, the outcomes are disastrous. Replication can be thought of as sharing information, and “thus, like all forms of transmitting information, replication is inevitably accompanied by some degradation, or at least change, in content.”² It’s not enough just to copy; there also need to be innovations and improvements to compensate for the errors that are inevitably introduced.

Beginning in the 11th century and ending in the 18th, the Habsburg family dynasty ruled over a significant portion of Europe. Members of the family at various times ruled over Germany, England, Hungary, Ireland, Portugal, Spain, and other countries. As Benjamin Curtis writes in *The Habsburgs*: “The family’s members were sure that they were born to rule... Their preeminence was longer lasting and their ambitions more grandiose than almost any other royal family.” The Habsburgs guarded their power so jealously that they loathed marriages that required them to share it with other families. Whenever possible, they chose to marry close blood relatives—first cousins or nieces—to keep their veritable empire intact. One of their mottos was “*Let others wage war; you, happy Austria, marry.*”³

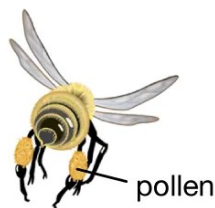
Unsurprisingly, the lack of genetic variation caused by these consanguineous marriages carried serious consequences. The best-known result of the Habsburg’s lack of diversity was their unusual jawline, with enlarged chin, an underbite, and thick lips. Even in their most flattering portraits, this feature is unmistakable.

Cross-pollination

pollen grains

1. Pollen from stamens sticks to a bee as it visits a flower to collect food.

3. Pollen on the bee sticks to a pistil of a flower on the other plant.



2. The bee travels to another plant of the same type.



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Brain Picking 能给读者带来什么?

The core ethos behind Brain Pickings is that **creativity is a combinatorial force**: it's our ability to tap into our mental pool of resources — knowledge, insight, information, inspiration, and all the fragments populating our minds — that we've accumulated over the years just by being present and alive and awake to the world, and to combine them in extraordinary new ways. **In order for us to truly create and contribute to the world, we have to be able to connect countless dots, to cross-pollinate ideas from a wealth of disciplines, to combine and recombine these pieces and build new ideas.**



微信号: ericzenenglish

I think of it as LEGOs — ~~if the bricks we have are of only one shape, size,~~

As the generations progressed, the results of their inbreeding led to extreme difficulties with basic things like speaking and eating. The Habsburgs' infant mortality rate was far higher than that of even the poorest members of society at the time. Between 1527 and 1661, the Spanish branch produced 34 children. Of these, half died in their first decade, and 10 before their first birthday.⁴

→ Closed systems, those without any new inputs, die in changing environments. Ultimately, after 16 generations of intermarriages, the Habsburgs ended up with such serious disabilities that they wiped the family out. Their success in controlling Europe proved to be a Pyrrhic victory. The final member, Charles II, was infertile and thus unable to produce an heir.⁵ He also experienced dire health from birth. He did not learn to speak until the age of four due to his distended jaw, could not walk until he was eight, frequently drooled, was of low intellectual ability, and was barely able to speak comprehensibly. His infertility may have been the result of a pituitary hormone deficiency, and he also suffered from kidney problems.⁶ Charles II died in his late thirties, young for someone of his wealth even at the time. He reportedly had the intellectual capabilities of a small child.

→ Replication is necessary but not sufficient for survival. The more you copy something, the more it weakens. Thus, replication alone is not always beneficial. Imagine a teacher photocopying a worksheet for a class then throwing away the original. The next year they make photocopies of the photocopies then again throw away the originals. As the years go by, the quality of the sheet progressively gets worse because each copy will pass on errors and introduce new ones. Minor problems compound with each copy. The

same happened to the Habsburgs. Without genetic diversity, recessive mutations that would have otherwise failed to show up in children were reinforced and compounded over generations.⁷ Only with the relatively recent discovery of genetics did it become clear why this happens. [Without diversity, replication only works if both the original and the copying mechanism are perfect. Otherwise errors build upon themselves.]



The German secret to hitting the replication “sweet spot”

↳ There is a sweet spot to replication. The components have to be rigid enough to be easily copied but flexible enough to adapt to inevitable changes. As with genetic mutations piling up, replication of errors compounds errors in all fields of human endeavor. We often think of new things as polluting or diluting and try to stick with the old, but this doesn't work. We need to inject newness, or the lack of variation proves destructive. Relevant to everything from military campaigns to venture capital, figuring out how to replicate strategy or success is critical. [How do you allow for adaptability and innovation without sacrificing your goals, values, or vision?]

After the Germans kept getting humiliated by Napoleon on the battlefield, they realized that his methods in war were different than any they had previously come across. If they wanted to win, they needed to change and try new tactics. Early in his career Napoleon employed the strategy of inserting his army between two opposing forces then striking at both before they could coordinate and combine. He wrote, “it is contrary to all principle to make corps which have no communication act separately against a central force whose communications are open.”⁸ The traditional German armies, with “their linear tactics, iron discipline, blind obedience and intolerance of independent action,”⁹ were initially unequipped to deal with Napoleon's approach. Recognizing the need for a new strategy, the Germans developed *Auftragstaktik* or what we now call commander's intent, which is the idea of sharing the information necessary “to empower subordinate commanders on

the scene.”¹⁰ The theory underpinning commander’s intent is all about trying to construct the right circumstances for replication.

Any given side in a confrontation wants to replicate their strategy to the point of execution. What is the best structure for this? Too rigid and the guy on the ground can’t adapt and innovate to execute the strategy when the circumstances change—which they will. There is a direct connection with the challenges of replication in biology: “Rigid specialization—by a genetic code, for example—is not feasible, simply because the code would be excessively large, prone to breakdown, and inadequate for anticipating the many challenges and opportunities an economic entity is likely to encounter during its lifetime.”¹¹

When the Germans faced Napoleon, they were experiencing problems related to their rigidity of organization. The guys on the front lines couldn’t adapt. Discouraged from ever considering the why or the rationale behind an order, the German troops had nothing to draw on when Napoleon changed his tactics mid-battle.¹² The environment always changes, which is why successful replication has a bit of flexibility built in.

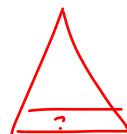
If there is not enough fidelity in the copying, however, the strategy gets polluted with too many errors and cannot be executed. Empowered subordinates can adapt to changing battlefield conditions, but giving flexibility cannot cost the commander the ability to synchronize events to execute the strategy.

As Clausewitz explained in *On War*:

Strategy is the employment of the battle to gain the end of the war; it must therefore give an aim to the whole military action, which must be in accordance with the object of the war; in other words, strategy forms the plan of the war, and to the said aim it links the series of acts which are to lead to the same, that is to say, it makes the plans for the separate campaigns, and regulates the combats to be fought in each. As these are all things which to a great extent can only be determined on conjectures, some of which turn out incorrect, while a number of other arrangements pertaining to details cannot be made at all beforehand, it follows, as a matter of course, that strategy must go with the army to the field in order to arrange particulars on the spot, and to make the modifications in the general plan which incessantly become necessary in war. Strategy can therefore never take its hand from the work for a moment. ¹³

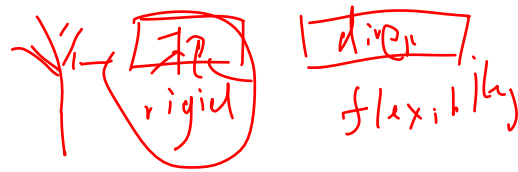
How do you hit the sweet spot between execution of strategy and flexibility to adapt to changing conditions? There are four elements of commander's intent: → formulate, communicate, interpret, and implement. The first two are the responsibility of the senior commander, the latter two the job of the subordinate commander. In order to develop these skills commanders must consider four criteria:

1. Explain the rationale (not just the what and why, but how they arrived at a decision)



2. Establish operational limits (identify what is completely off the table)
3. Get feedback often (a continuous loop between levels)
4. Recognize individual differences (the unique psychological makeup of each subordinate) ¹⁴

In combination these criteria, when executed properly, hit the sweet spot of replication. They allow for the continuous application of strategy, while having room to adapt and innovate in the face of changing conditions.



Replicating a culture

The model of replication can also be used to help us understand why some products or customs propagate around the globe. Often, when exposed to other cultures, we notice the differences: The things that those others do or say that we find foreign and almost nonsensical. Ideas that seem to be barriers to communication and understanding. It is possible, however, to see these customs as being too rigid to allow for the necessary development that comes when new ways of doing things have to fit into existing cultures. There are spectacular examples of customs that are near global, something that otherwise disparate cultures partake in, albeit in slightly different ways. One of the products that has had the flexibility to take root all over the world is tea. How it was able to replicate, not just biologically, but culturally, speaks to the value of being able to adapt.

Tea-drinking cultures are all over the world. From China, Japan and Russia, to Iran, the United Kingdom, and Kenya, tea has spread everywhere.¹⁵ In most places, the development of a tea culture—simply understood as a place where a lot of people like drinking tea—followed a typical pattern. First, a place was exposed to tea, whether from explorers, voyagers, or invaders. Once people got a taste for it, the country began trading for it. Then, after its uptake into the culture, countries would try to grow it themselves, climate permitting. This was a pattern that played out in many areas around the globe.

Tea first started in China, as the tea plant is only native to a small region encompassing southwestern China and parts of India

and Myanmar. Cultivation of the tea plant started there at least 3,000 years ago and as early as 400 CE was being describe as a drink that “lightens the body and changes the bones.”¹⁶ Tea can taste wonderful, but now we also know that it has caffeine, which is no doubt a huge part of the reason for its initial and ongoing popularity.

Tea has played a lot of roles in China. For many centuries it was one of the country’s greatest exports and has played a significant part in the country’s international relations with everyone from the Mongols to the British. Tastes changed and evolved over time in China, regarding the right way to brew a cup or the right tools required for serving. However, when it comes to tea, China is the original consumer of the plant, and it was ultimately from there that everyone else replicated their tea culture.

Traveling Buddhist monks brought tea to Japan, where tea and its associated ceremonies became related to both political power and cultural expression. Tea came over from China a few times, but as Victory Mair and Erling Hoh explain in *The True History of Tea*, “It was not until 1191, when the Buddhist monk Myoan Eisai, having returned from studies in China, began to propagate Zen as a teaching that could save Japan, and tea as a medicine that could restore the Japanese people to health, that Japanese tea culture began to develop in earnest.”¹⁷ Once the culture had started, the Japanese began to cultivate the tea plant themselves. Tea consumption became part of a much more elaborate cultural expression. The tea ceremony, or *chanoyu*, was long and complicated, and each participant was required to know their roles going in. But far from being a turn-off, this complicated way of

consuming tea “was perfected as an art form that fuses nature, the crafts, philosophy, and religion, lending poignant expression to the Japanese spirit.”¹⁸ Tea had undergone its first total replication, leading to new cultural expression in Japan.

In the 17th century, trading routes developed linking China and Russia. Tea was one of the most important commodities that made its way from China to Moscow, over 4,000 kilometers away. The Russians took to tea almost immediately. “From the gilded halls of the Kremlin, to the tarred cabins of the country’s peasants, tea became Russia’s national temperate drink, and the samovar, a metal urn used to boil water, the embodiment of the warm, hospitable Russian hearth.”¹⁹ The Russian temperance movement actively promoted tea as a means of reducing vodka consumption. Initially, Russia sustained its tea habit through trade with China. However, as time passed, Russia wanted to change its dependence on Chinese tea. So, “in 1893, the Popoff tea firm established the empire’s first tea garden in the Caucasus near the Georgian town of Batumi.”²⁰ Thus, Russia began to cultivate its own tea, creating another cultural and industrial replication.

The last place we will look at is the development of tea culture in Persia, the region now known as Iran. Tea came to this area not directly from China, but via the groups in central Asia who had already become addicted to tea, and who carted it into Persia for trading purposes. There, “by the first half of the 17th century it had become part of daily life.”²¹ Tea was well suited to Islamic culture given its prohibition of alcohol. It provided a religiously acceptable little boost. Tea taverns developed “where persons of good repute went to drink tea, smoke tobacco, and play chess.”²²

Persian pilgrims took tea to the countries of the Arabian Peninsula, much like the Buddhist monks had taken tea all over China and to Japan. As tea culture firmly took hold, Persians too desired to reduce their dependency on outside sources for the plant. So “tea production was initiated at the beginning of the 20th century, when the Persian consul to India succeeded in smuggling some 3,000 Assam tea seedlings back to his country and had them planted in the Lahijan region on the southwestern side of the Caspian Sea.”²³ And thus did the replication of tea as both industry and culture continue.

→ What is it about tea that allowed it to be replicated all over the globe? For starters, tea has an inherent flexibility. There are multiple ways to make and consume tea, which can be modified based on cultural norms and social desires. Different degrees of oxidization of tea leaves will produce green, oolong, or black tea. Each of these can flavored with different spices or milk, or whatever else is locally available. It lends itself to different brewing techniques based on local equipment and resources. But all outputs of seeping tea leaves in boiling water are uniformly called *tea*. So there is also a core structure that cannot be changed. Tea only comes from the tea plant.

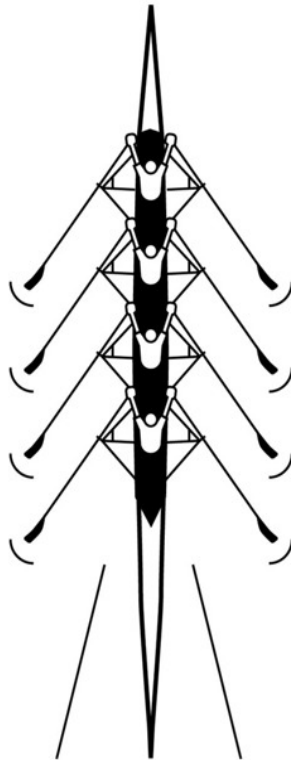
This combination of a firm concept within a flexible package is one clear explanation of how tea managed to spread from a tiny geographical location to have acolytes in almost every country on the planet.

Conclusion

Replication as a mental model teaches us that we don't always need to reinvent the wheel. Often a good starting point is what others are doing. Once you get a sense and a feel for the environment you can adapt to better suit your own needs. What we need to remember is that effective replication requires enough structure and space to produce a copy, but enough flexibility to adapt that copy to changes in the environment. Just because something has worked for a while doesn't mean that it will continue to be effective in perpetuity. Maintaining a successful approach requires an ability to grow and modify that approach as required.

Biology

Cooperation



—
Work together.