

V > Λ: The Inverted Hierarchy

Hierarchies are one of nature's oldest and most fundamental organizational structures, in part because they help make a system robust and efficient.

They have become robust over the eons as the systems and subsystems of which they are composed have gone through iteration, adaptation, and evolution, having survived evolution's perpetual culling.

Hierarchies are also efficient because they allow for decentralization of information. From Donella Meadow's superb book, [Thinking in Systems](#),

Hierarchies are brilliant systems inventions, not only because they give a system stability and resilience, but also because they reduce the amount of information that any part of the system has to keep track of. In hierarchical systems, relationships within each subsystem are denser and stronger than relationships between subsystems. Everything is still connected to everything else, but not equally strongly. If these differential information links within and between each level of the hierarchy are designed right, feedback delays are minimized. No level is overwhelmed with information. The system works with efficiency and resilience.

Over time, with just the right blend of stability and chaos, higher and more complex levels emerge. These higher levels are composed of and reliant on well-tested, above-average simpler blocks, naturally resulting in hierarchical structures.¹ *In this sense, quality emerges from quantity, complexity from simplicity.* Since the simple organisms, the

There is logic in nature much deeper than we can often understand.

- Nassim Taleb

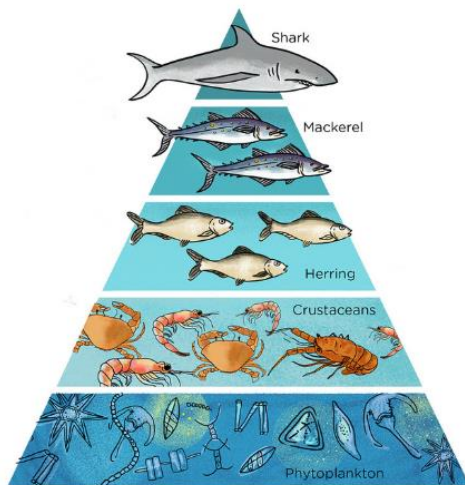
¹ I think this is a beautiful model which can be helpful in designing a more productive, fulfilling, and meaningful life. If you can blend enough chaos and stability into your life, relationships, routines, work, fitness, learnings, you can take advantage of what seems to be a fundamental principle of nature. Periods of stable intermediate forms are vital for life to flourish and evolve. This is where flow exists – too hard (too much chaos) and you can't progress, but too easy (too stable) and you'll be bored. Don't burn yourself out but also don't get complacent. Life flourishes at the edge of chaos, equilibrium = death. Learn from nature and use it to your advantage. These principles have survived the test of time in nature's most brutal arena and the statistical sample is large enough to trust.

“bottom of the hierarchy,” give life to all resulting forms of more complex behavior, the argument can be made that the base is, in fact, the most important level of the hierarchy.

For example, in biology hierarchies emerge over time as “fit” behaviors, genes, and adaptations which enable an organism to survive long enough to procreate and proliferate get passed on – Darwin’s often heard “survival of the fittest.” The fittest organisms (those most able to rapidly and effectively *adapt*) will survive and reproduce, spreading its genes and traits. At the beginning only simple organisms exist but through this process they give rise to the complex organisms and behaviors we see today, making the simple organisms vital since they serve as the foundation for further complexity.

Life exists in between order and chaos - in a kind of phase transition where it is best able to coordinate complex activities and evolve... The very nature of coevolution is to attain this edge of chaos, a self-organized criticality, a web of compromises, where each species prospers as well as possible but where none can be sure if its best next step will set off a trickle or a landslide. This world does not lend itself to long-term prediction, we cannot know the true consequences of our own best actions. All we players can do is be locally wise, not globally wise

- Stuart Kaufman, [At Home in the Universe](#)



However, the typical pyramid-shaped hierarchy doesn’t intuitively depict what we’ve just discussed – that the “bottom” of the pyramid is in fact most important – since it shows the simplest organisms on the lowest rung of the food chain and the apex predator on top.² Each step in the evolutionary chain serves as the launching off point for the next and, if the simple does not survive, neither will the complex. *The simple is literally the foundation of the pyramid, the keystone in the archway. If you remove the algae, phytoplankton, and krill at the foundation, every layer above it crumbles.*³

² [Image credit](#)

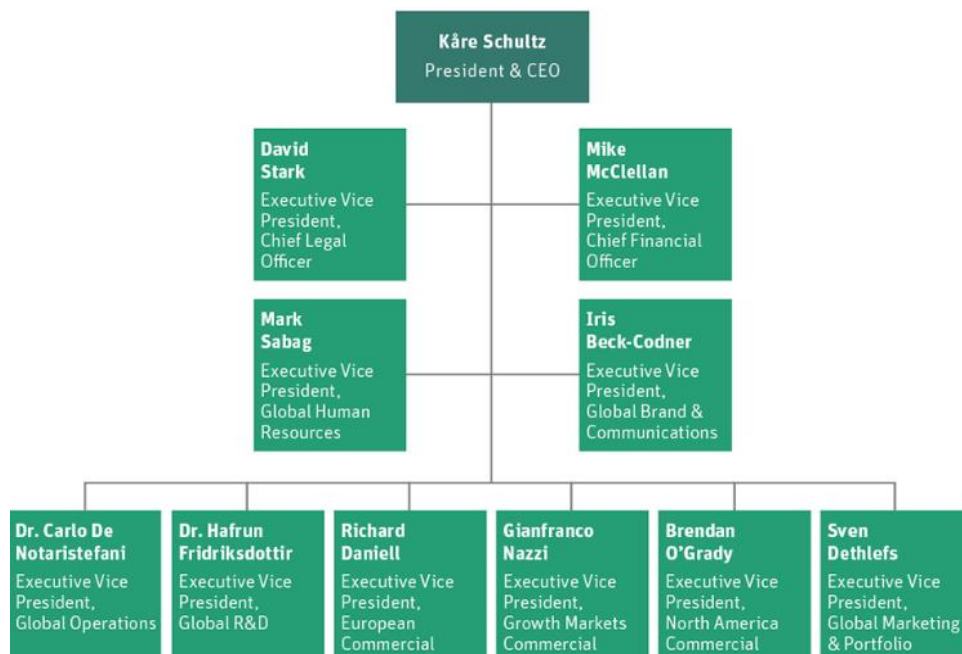
³ This is highly simplified of course as these food webs are complex adaptive systems that are dynamic, interconnected, and interwoven, but safe to say that removing the base of the pyramid causes chaos.

A forest would have no problem doing without its larger inhabitants. Deer, wild boar, carnivores, and even most birds wouldn't leave any yawning gaps in the ecosystem. Even if they were all to disappear at once, the forest would simply go on growing without many adverse effects. Things are completely different when it comes to the tiny creatures under their feet.

- Peter Wohlleben, *The Hidden Life of Trees*

Now, moving from biological to human systems.

Many companies have an “org chart” – a pyramid-shaped hierarchy in which the CEO is depicted at the top (as apex predator) and the minions fall below:



Although this hierarchy appears similar to the biological hierarchy shown above, what many human organizations forget (or ignore) is that the simple kernel out of which the hierarchy grew, the “bottom of the pyramid,” is most important.⁴ When this happens, it can cause malfunctioning, suboptimal hierarchies where the top disproportionately benefits, opening up “niches” for bureaucracy, politicking, and other parasitic behaviors to thrive.⁵ The organization predictably loses its focus on its frontline people, those who have direct contact with customers, and instead

⁴ [Teva's org chart](#) (not a slam on Teva, just a *generic* example...)

⁵ See Safi Bahcall's [Loonshots](#) for more on this, specifically his discussion on “return on politics”

optimizes for market share, growth at any cost, mergers and acquisitions, executive compensation, or other mainly ego-driven motives and perks.

Besides the obvious power, status, and monetary incentives listed above, another agency cost arises due to mismatched timeframes.⁶ According to Harvard Law School, the median tenure for CEOs in large-cap companies is only five years.⁷ Most CEOs are aware of this and this short time frame, coupled with the extreme stress and pressure which causes burnout, makes it difficult to think and see long-term. Since they will likely be out in about five years, they make decisions based on that time frame, looking to juice their company's stock performance so that their bonuses reflect that growth. This leads to risk-increasing behavior such as taking on excess leverage or irrational

If everything you do needs to work on a three-year time horizon, then you're competing against a lot of people. But if you're willing to invest on a seven-year time horizon, you're now competing against a fraction of those people, because very few companies are willing to do that. Just by lengthening the time horizon, you can engage in endeavors that you could never otherwise pursue. At Amazon we like things to work in five to seven years. We're willing to plant seeds, let them grow – and we're very stubborn.

- Jeff Bezos, [New York Times](#)

M&A. Through this short-term lens, this risky behavior makes a ton of sense, but if you have more of a perpetual time-frame, one similar to nature, these decisions are likely nonsensical.

These types of organizations also tend to fall into the trap of what computer science calls “premature optimization.” They prematurely impose structure and complexity, ignoring nature's typical process of iteration, adaptation, and evolution. They forget that complexity doesn't arise out of thin air, that it evolves from the simple, and that this process makes the system antifragile. *This type of tinkering is “antifragile” relative to blueprints and rigid plans because it allows for optionality and better decisions as more accurate information becomes available over time.*⁸ However, many people aren't in a system which allows for this type of process or simply don't have the patience, the “long-term gratification gene,” for this type of growth. They do too much at once, skip steps, and put their ecosystem in jeopardy by trying to grow too fast. While slower in the short-term, copying nature leads to growth which is robust, sustainable, optimal. *Copy*

⁶ Agency costs are extremely important to look out for. Essentially, misaligned incentives causing unwanted behavior.

⁷ [Harvard Law on CEO Tenure](#)

⁸ Nassim Taleb's [Antifragile](#) is fantastic. One of my main takeaways is that systems (businesses, your body, nature, etc.) can be fragile, robust, or antifragile (and anywhere along this spectrum, of course). They either weaken or break with chaos (fragile), can handle a lot of it (robust), or actually get *stronger* with it (antifragile). Certain incentive structures, diets, and other behaviors and actions can help move you or your organization towards being antifragile, an envious place to be. This is a beautiful mental model to apply to your various life domains.

nature and start with simple systems and iterate. Don't instill or force a complex system on a situation when a simple one will do.

These types of issues are deeply embedded in the structure of these organizations and won't go away unless the problem is seen holistically – admitting that the system is the cause of the problem and only by restructuring it will anything be solved. No rah-rah speeches, ping pong tables, or other surface-level benefits will make a dent if the structure isn't dealt with.⁹ What makes a difference is redesigning the system to improve the flow of information, incentives, goals, stresses, constraints, stocks, and flows that impact specific actors or processes.

Structure always affects function. The structure of social networks affects the spread of information and disease; the structure of power grids affects the stability of power transmission. The same must be true for species in an ecosystem. The layout of the web must profoundly shape its dynamics.

- Stephen Strogatz, [Sync](#)

If you are looking to change a system, a helpful tool in this process is to observe its long-term behavior. People can hide behind PowerPoints and corporate doublespeak, but the actual behavior of the system can't be hidden. This behavior will provide clues to the system's underlying structure, and the structure is the key to understanding not just what is happening but *why*.

Since structure always affects function, it doesn't cost, it pays to spend an inordinate amount of time on the culture, the environment, the incentives. The structure is more important than the individual agents because the structure impacts the dynamics and interactions between the agents. It fundamentally drives and impacts behavior and is why a dumb rule in a well-structured system can achieve world-class results, but you hardly ever see the opposite.

Hierarchies are partially decomposable and much can be learned by taking apart systems at different hierarchical levels and studying them separately.

- Donella Meadows

While the impacts of these changes could be tremendous, altering a culture or structure may be one of the most difficult leadership tasks anyone can take on. You have to be very careful and thoughtful about incentives, and even then there will be ripple effects you can't predict. *You must deeply understand the structure of the system – the interactions and dynamics – before you can hope to make any positive, significant, and lasting changes. It is also vital to remember that an important function of nearly every system is its own perpetuation – never underestimate self-preservation.*

⁹ For some beautiful language and a deeper understanding on the importance of structure, see [The Path of Least Resistance](#)

Just because you think it's a good idea, doesn't mean those within the system agree, and they can sabotage even your best efforts. What looks like a bug, may, in fact, be a feature.

While still difficult, a useful tactic to approach this effort may be one Munger espouses – Jacobi's often cited, "Invert! Always Invert!" This can be a helpful tool when trying to assess a situation as it helps you gain fresh perspectives by looking at problems from different angles. Although it is impossible to fully see or understand a system of which you are a part of, by inverting the system, the hierarchy, you can gain perspective, allowing you to more clearly see who is really "on top" and most important.



Hierarchies evolve from the lowest level up. The original purpose of a hierarchy is always to help its originating subsystems do their jobs better. This is something which is easily forgotten and leads to malfunctioning hierarchies.

- Donella Meadows

This inversion makes it more obvious who is on top, but also plainly shows that the hierarchy depends on a capable leader – one who can “balance” the system, set the vision, foster the culture, hire the right people, and decide on pricing. However, the frontline crew make up the majority, they are the “originating subsystem,” and the rest of the hierarchy, the “management,” should be a support function for them.¹⁰

Similar to how a biological hierarchy is decentralized, leaders can do the same in their human-centered hierarchy. Because management doesn't have the in-depth customer knowledge like the frontline crew does, they shouldn't be making these types of decisions. If they can decentralize and push information and decision making as far down the ranks as possible, they can empower the people at the bottom of the pyramid, giving them responsibility and accountability for areas in which they have the best information. This not only helps the crew learn and grow, fostering the next generation of leaders, but it also gives the current leadership more time to do things that only they can do. *The most effective leaders set up their team for success even if, especially if, they*

¹⁰ For more on this “management as a support function,” see [Joel Spolsky's guest post](#) for Fred Wilson's MBA Mondays

step down. Smart and talented people always have options and, if ignored, they will vote with their feet – they will leave the organization and your company will only be left with B-player “yes-(wo)men.”

You [former Home Depot CEO [Frank Blake](#)] now have a prominent job. But you don't have a significant job. Don't confuse the two. You have a prominent job because you're the one who talks to investors, does interviews and so on. But you don't have a significant job, because the only significant jobs are the ones that help customers. As we move to higher and higher levels in an organization, we tend to forget that. We tend to equate prominence with significance – and that creates all kinds of bad behavior, as well as an overall loss of bearings.

– Bernie Marcus, Co-Founder of The Home Depot

While we've focused on negative examples so far, there are of course some beacons of light we can learn from and emulate. They have figured out this “hierarchy inversion” and treat their most important people, those at the bottom of the pyramid, as just that.

For example, it is a core tenet of both Herb Kelleher's Southwest Airlines and Danny Meyer's Union Square Hospitality Group to keep laser focused on the bottom – treating the airline attendants, reservationists, servers, and dish washers with trust, respect, and affection.

Herb Kelleher has always treated his employees one step up, and it shines through in their humor, attitude, loyalty, and customer service mindset. This is his “employee's first” mantra – employees who are treated well, empowered, trusted, and respected are happy and fulfilled, and this transfers over, as if through osmosis, to how the employees treat customers.

One of my original inspirations for this essay came from Danny Meyer's, [Setting the Table](#). He expresses this concept beautifully and calls it “enlightened hospitality,” crediting this philosophy for his success and growing restaurant empire:

If the employee creates this valuable experience, it should be clear that management's job is, among other things, to set the vision, communicate that vision well, and help eliminate any obstacles that stand in the way of the employees serving the customer. This flips the typical pyramid shaped hierarchy on its head. No longer is management at the top of the pyramid,

instead, the salesmen, developers, designers, product managers, servers, customer service agents, etc. are at the top.

...

In any hierarchy, it's clear that the ultimate boss holds the most power. But a wonderful thing happens when you flip the traditional organization chart upside down so that it looks like a "V" with the boss on the bottom. My job is to serve and support the next layer "above" me so that the people on that layer can then serve and support the next layer "above" them, and so on. Ultimately, our cooks, servers, reservationists, coat checkers, and dish washers are then in the best possible position to serve our guests ...I staunchly believe that standing conventional business priorities on their head ultimately leads to even greater, more enduring financial success.

Kelleher, Meyer, and plenty of others have found and taken advantage of what seems to be a direct correlation – showing that the better employees are treated, the better they treat their customers. While this may seem too “yummy,” as Kip Tindell of [The Container Store](#) would call it, it has proven to not only be more fun, but also sustainably profitable.

A business absolutely devoted to service will have only one worry about profits. They will be embarrassingly large.

- Henry Ford

Although difficult, expensive, and time-consuming to operate like this, like any flywheel, you become very hard to stop once you reach critical mass, becoming more robust with time, just like natural systems.

Hierarchies are nature's fundamental organizing structure – robust and efficient

See the foundation of the pyramid for what it is – the most important

You must change the structure to change behavior

Compensate complexity with simplicity

Invert the hierarchy

