

Optionality: The Missing Piece in Building Antifragility

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Globalization and interconnectedness have made the world a giant village, where everything is influenced by things happening everywhere, markets and societies are susceptible to disruption, and domino cascades are easily triggered. Besides providing access to foreign markets and cheap labor, [Globalization has also brought on a set of hidden risks](#) to economies and organizations. And yet [this trend is nothing new](#): it's part of ongoing developments in society since the beginning of civilization, which exploded during the second half of the 20th century.

What changed during that period? A lot: viruses now travel by plane and spread across the globe in a matter of days. Millennials create digital products from home that disrupt markets and put big corporations at risk of failure. Global supply chains enable unprecedented productivity and profitability, while exposing entire industries to new risk scenarios – [flooding in Southeast Asia](#) can have catastrophic effects across the worldwide electronics sector, for example.

Although large-scale interdependencies are behind these conflagrations, it's important to remember that the match is not responsible for the fire, but rather that the grass is dry and ready to burn, and that someone eventually might ignite it either on purpose or by accident. While [predicting the next fire requires skills borrowed from witchcraft](#), it is possible for leaders and decision-makers to prepare themselves so they don't get burnt down.



Uncovering Patterns of Fragility

Systems become fragile when they lack the ability to respond to environmental developments like unforeseeable events, rapid changes, shocks and disruptions. Regardless of how strong they might seem, [systems will inevitably fail if the environment demands capabilities that aren't available when needed](#). Until recently, organizations dealt with uncertainty by [trying to reduce their exposure to it](#). However, in the current context, that is impossible. Nowadays, organizations must increase their variability to succeed.

The organizational patterns of any system influence its range of actions, flexibility and capacity to adapt. Specifically, [rigid and centralized structures can be more fragile than federated and diverse ones](#). Centralization improves speed and efficiency at the cost of reduced variability. Despite being operationally less efficient, federated organizations become more effective in the long run. The more federated an organization is, the more varied its resources, which ultimately determines its range of available responses and survival chances.

Centralization and federation should not be considered antagonists, but rather complementary components. Centralization improves speed when environmental demands are comparable and solutions do not have to be customized. Moreover, by reducing the description of the system, centralized entities may provide leadership and direction, which would be harder for decentralized units to achieve independently given the complexity of their tasks. However, if the environment is complex, centralized entities may get overwhelmed and either become [slow at responding to increasing demands or reduce the complexity of tasks beyond the irreducible limit](#). To

operationalize federation, firms need to differentiate between low- and high-complexity tasks where each form of organization applies best.

Antifragility = Optionality

To state the obvious, fragile systems are not well equipped to survive [uncertainty](#). According to [Nassim Taleb](#), everything that is fragile will eventually break. Robust systems survive shocks and maintain a condition similar to their pre-stress state. They continue to function past the changes in the environment. Similarly, resilient systems “bounce back,” returning to their original condition after an interval of diminished capacity. While these qualities are desirable, they don’t imply learning from experience. The systems continue to be at risk of larger shocks in the future.

In contrast, [antifragile systems become better with stress](#). They overreact to shocks and create additional resources, which allow them to resist larger future shocks. Antifragile systems expand their diversity and [optionality](#) while interacting with the variability of the environment. Creating options is the key to antifragility. Optionality translates into increasing variability for assuring operations and improving performance. This includes adopting new technologies, exploring adjacent possible products and markets, as well as creating an environment for teams to organize and respond effectively without the need of centralized orders.



Time Matters

The dynamic nature of economies and society constantly changes the conditions in which firms operate. In the financial context, it is well known that diversification is one of the cornerstones of risk management in any portfolio. Individuals and organizations may be fragile to environmental changes due to the same lack of options and diversity that make financial portfolios vulnerable. For example, over-specialized skills in a particular area makes us fragile to changes in the market. To achieve individual antifragility, we must first [change our mindset to one of continuous learning and embrace shocks as opportunities for growth](#). It may not be pleasant, but if a radical change in a job description or marketplace leads us to expand our fields of knowledge, we become richer from it. Professionals who neglect learning financial, sales, negotiation, management and other skills become vulnerable – and fragile.

Similarly, [companies should avoid becoming overly focused on particular technologies or markets](#). Focusing on a few variables that matter is crucial for establishing competitive advantage. However, top performing companies understand that transforming their core business could be necessary for survival and continued excellence, even if that means redefining their whole business.

Collective Motion

Another source of fragility in companies stems from their managerial practices. [Performance is tightly connected to the behaviors that emerge from a group of individuals](#). Such behaviors depend on the capacity of individuals to associate and create synergies between complementary skills. If everyone thinks and behaves the same way or within strict constraints, the possibilities for collective actions will be a lot more limited than if diversity and combinations are allowed. This capacity is critical during times of uncertainty, where nothing has been previously planned. In this situation, there are no guidelines on how to proceed and operate – the only resource that can truly make a difference is the team's collective action.

Traditional managerial practices like [hierarchical division of labor](#) constrain the possibilities of workers' behaviors and, in turn, their range of collective motion. Having flexible and adaptable teams is crucial for surviving – and growing through – crisis events. The stress created by uncertainty induces a further exploration of the space of possible associations among workers and managers, which is recorded in the web of trust and organizational culture. Similarly, if the manager limits the organization to his or her own cognitive bandwidth, the range of motion of the whole firm is limited, making it

less adaptable. Regardless of how outstanding individual leaders may be, if they do not federate their work, the organization's performance will inevitably decline after they retire. In contrast, [distributed decision-making processes among managers and workers create a complex web of knowledge and information that forms a basis for responding to crises.](#)



Purpose-driven

Federation is necessary, but it cannot be developed alone. Human motivation is not trivial and behaviors cannot be simply dictated. Without creating the right environmental conditions, traditional methods like compensation mechanisms can backfire and create undesired outcomes. Current motivation theory, as laid out e.g. in [Daniel Pink's influential book "Drive"](#) (2009) among other works, points to a sense of purpose as a key motivating factor. Pink claims that motivation is based on the trinity of purpose, autonomy and mastery (getting better at something).

In the book [Teams of Teams](#), General McChrystal defines the steps towards decentralizing the workforce by identifying which tasks belong to the centralized entity and which should be federated down to teams. These steps are in agreement with the

values identified by TDE for the creation of a [human-centered economy](#): leaders must create environments where trust is cultivated, communication is facilitated, purpose is shared and accountability measures are fair. These principles cannot be applied in isolation, but must be present simultaneously for social relationships to occur naturally and become resilient rather than fragile. Trust, diversity and collaboration cannot be dictated, but emerge as a consequence of other “hygiene” factors (see [Herzberg Theory of Motivation](#)).

Becoming Antifragile

Leaders and decision-makers must examine their strategies and tactics to determine how vulnerable and fragile they are in the face of uncertainty. Inaction is not an option in an era marked by constant testing of the stability of markets, financial systems, firms or even our own lives. Ultimately, recognizing the balance between centralization and federation is the first step towards creating antifragile strategies. Federation increases the complexity of our systems’ behaviors and creates further options and diversity to match our actions with changes in the environment. Just as we diversify portfolios, we should also diversify the relationships in our workforce to increase the range and effectiveness of their collective action.

About

[The Digital Economist](#) is a global impact organization with the mission to drive technological convergence towards a human-centered digital economy by bringing investable opportunities, in line with the Sustainable Development Goals, to the fore. For press inquiries, please reach out to press@thedigitaleconomist.com. For partnerships please contact directly : navroop@thedigitaleconomist.com.