his article, he warns that we are creating conditions for diseases such as Covid-19 to emerge.

b) Climate change and consumption

In his essay, Harald Welzer warns that the ecological problems of the present day, and climate change too, are ultimately due to the fact that expansive luxury consumption unleashes its destructive power, especially when it becomes mass consumption. We as individuals do things that we know to be wrong but we cope with it astoundingly well. Changing behavior means "fighting our demons."

But there is hope: Project Civilization is not over and continues still today. But neither does it have a finite goal or an ultimate solution. Society must be adaptable to changing conditions and requirements and deal with mistakes and collateral damage — and therefore be correctable.

c) Multilateralism

The road to recovery is paved with uncertainty, agrees EU Commissioner for Economy, Paolo Gentiloni. And he adds in his detailed interview that the EU will continue defending multilateralism while working to adapt it to the new realities of our highly connected and digitalized world economy.

A practical example of this debate on multilateralism, the borders of the nation-state, and the obligations of the global community is the dispute over the protection of the Amazon. Lenzi believes that the Amazon fires show why we need global governance in the Anthropocene.

d) The efficiency trap

The WBCSD states in a recent study: "In the coming months and years, companies will need to prioritize resilience-building to ensure they are better prepared for the next shock when it comes. For many, this will mean establishing a better balance between efficiency and resilience in everything from supply chain configuration to financial management."

Unconsidered efficiency becomes a risk: Overly complex systems and supply chains are very sensitive. Agriculture also teaches us that although monocultures are very efficient, they also lead to high vulnerability. Eichengreen concludes: "For firms, enhanced security and certainty will mean higher costs and lower productivity, which will translate into higher prices for consumers."

The planetary limits of growth play another important role. In our world, dealing with limited resources is a constant reality, and therefore normal. Mario Schmidt writes an essay on the importance of efficiency for sustainability: "In the market economy, the profit motive of individuals is used to accomplish this task. However, the maximization of profits by companies is only a means to an end and not, as is often circulated, the goal in itself. An economy that does not fulfill its social function is ultimately impractical."





Asymmetric shocks, global mental preparedness for change – the paradigm shift and the economics of anti-fragility



Prof. Dr. Dr. Stefan
Brunnhuber
Professor for Sustainability
and Psychology
Member of the Club of Rome

Asymmetric shocks are the "new normal"

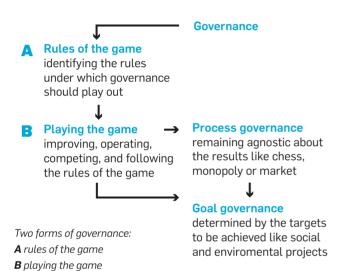
I Asymmetric shocks are shocks that hit human societies even though we think we have done everything right, and even though we believe we have not caused this shock. II Asymmetric shocks affect human societies in an uneven manner, hitting some harder than others. III Asymmetric shocks affect entire systems in disruptive and extreme ways, requiring interventions that go beyond well-known conventional tools and instruments. Covid-19, global warming, financial crises, loss of biodiversity, plastic waste, forced migration, terrorist attacks, failed states, and ongoing deforestation are examples of such asymmetric shocks.

These shocks can hit anybody on this planet, irrespective of where they live, how old they are, how much they earn — anytime and anywhere. In general, any system hit by an asymmetric shock experiences stress and is put under >>>

Global Goals Yearbook 2020



pressure to adapt to the new circumstances. Depending on the severity of the stressor, its duration, and the system's own configuration and resilience, systems either have to readjust the given rules to improve their governance in order to better cope with the stressor, or they have to question the rules of the game themselves in a more radical manner. In this second alternative, the system needs to find new ways of self-organization, a new set of rules, and new ways of doing and processing. As a world community, we presently find ourselves in such a situation. Asymmetric shocks have become the new normal, and this requires us to change the rules of the game.



Global mental preparedness for change: The "Kairos moment"

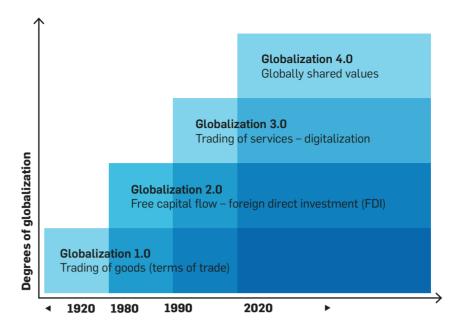
Any changes to the rules of the game require the mental readiness to do so. For the first time in history, we are witnessing a collective mental readiness across the globe for change for the 7.5 billion humans on this planet. The viral pandemic has triggered this preparedness. Governments all over the world have proven they are willing to take radical steps and bold decisions, embracing more far-reaching perspectives than ever before. However, there are now two ways to go. One way takes us back into a business-as-usual scenario, whereas the other leads us forwards toward new thinking, making a new paradigm possible. Humanity has not experienced an opportunity like this for decades, if not centuries. This is a kind of "Kairos moment." In Greek mythology, Kairos was the god of the right moment and the perfect opportunity. We are now experiencing such a Kairos moment.

Though humanity has always experienced crises, catastrophes, and conflicts, this time is different; As a world community in the 21st century, we are better equipped with empirical scientific evidence than ever; we have a deeper and better understanding of complex, non-linear systems; we have dozens of new disruptive digital technologies at hand that can help us to navigate this Kairos moment; and we have a strong third sector involving millions of non-governmental organizations able to step in with their expertise and hands-on experience, well-placed to change the world. In fact, this Kairos moment helps us to better understand that, historically, globalization started some 100 years ago with the trading of goods, followed first by the exchange of capital flows all over the world, and then by the exchange of services. Until 1989, globalization followed the aim of increasing national wealth and well-being. Following the 1992 Washington Consensus, however, globalization became an end in itself, with isolated agencies and individuals able to benefit, and nations themselves becoming a means of enriching this globalized elite. This overstretching, which lasted almost three decades, is now over. Now we are entering "Globalization 4.0." where we not only share goods. capital, and services, but also where we are poised to share common values such as trust, cooperation, reciprocal tolerance, and solidarity. We are starting to understand that we need a failure-friendly environment in which we can make mistakes and accept advice from others without losing face - all on a global scale. It is this form of Globalization 4.0 that will provide us with the required humility and grace, grit, and mindfulness to move forward toward a new era.

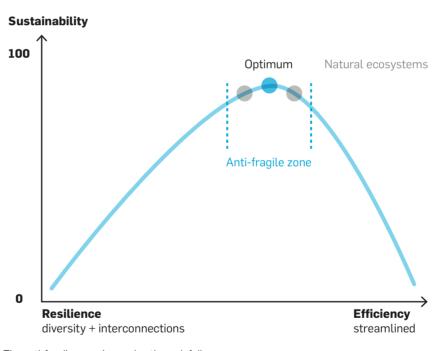
Dealing with uncertainty: Dancing with the system and finding the right attractor

Never in history have we been confronted with so much information, so much ignorance, and so many unknown factors at the same time, and never have we had to take so many relevant decisions under such uncertainties and time pressures. The uncertainties we face are not entirely quantifiable, and probability statistics will not help us to put a price tag on them. They are not complicated puzzles we can solve, but rather complex mysteries we can discover. These uncertainties form part of the systems dynamic of every complex system. They will not go away, but rather require us to adopt a different attitude. There are several ways of dealing with such uncertainties. The most prominent way is to create a false illusion of control through increased regulatory efforts and more data. Another way is to start avoiding complexity through denial. A third prominent way is to adopt the so-called fight or flight mode.

Either way, these approaches are insufficient and inappropriate for coping with non-linear, complex systems. They



Globalization 4.0



 ${\it The anti-fragile zone: Improving through failure}$

cause asymmetric shocks, Black Swan effects, uncontrollable exponential developments, unexpected knock-on effects, irreversible tipping points, and feedback loops that nobody can foresee. Instead, we need to learn to "dance with" or "ride" the system. This might require us to take a mental pause and embrace failure-friendly procedures that allow us to explore new territories and engage in outside-the-box thinking, where revision, critical public discourse, the introduction of new ideas, and a new paradigm become the game changers. We

will then start to engage and deal with the dilemmas and paradoxes that will not go away, we will begin to accept that the unknown is part of any decision-making and is sharply distinguished from purely statistical probabilities, and we may end up with the capability to distinguish between "relevant" and "less relevant" issues. If this assessment is correct, then identifying singular cause—effect relations through isolated experimental and analytical designs that only rarely occur in complex living systems will provide us with little additional information to solve complex problems.

Acknowledging this scenario, it will become more rational for our risk assessments to look into the future and identify so-called attractors. Attractors are like funnels that pull all of a system's major variables toward the future, rather than these variables being pushed by singular causal links from the past. Our financial system, digitization, and shifts in our gravity of consciousness constitute such fundamental attractors.

Toward an anti-fragile economics: Improving through failure

Living in a complex, connected, and constrained world in which non-linear, non-sequential effects prevail and interdependencies and multiple perspectives dominate — a world in which we have to operate within planetary boundaries and are equipped with imperfect information to change the course of history — we have a collective interest not only in moving out of the current crisis, but also in solving the associated problems that caused the crisis in the first place. The time after

one asymmetric shock is quite literally the time before the next asymmetric shock. Acknowledging this, we can see that complex systems find their optimum not in an ever-increasing, expanding, and streamlined throughput per time, referred to as "efficiency" (measured in global value chains), but rather in a balance between efficiency and "resilience" (measured in the amount of diversity and interconnectedness), sometimes called the anti-fragile zone. This zone describes a situation in which we can start to improve and gain from failure.

© 18 Global Goals Yearbook 2020 Global Goals Yearbook 2020 19 ♥





Where digitization will further penetrate our daily lives, our work places, and our businesses as a whole, where millions of jobs will potentially become replaced by robots and automated industries, we need to reframe the social fabric in an intelligent manner by starting to provide an unconditional basic income.

toward more decentralized and regionalized renewables. Social entrepreneurship will gain momentum over Big Pharma, Big Banking, Big Farming, and Big Energy, where downsizing and rightsizing will generate a sense of "small is beautiful" that will become the new standard. This could even mean that we shift away from a more production-based economy toward a more care-based economy, where human-centered services (nursing, social work, cultural creatives) are honored and properly reimbursed. Any necessary production will be done by a robot anyway. This anti-fragile zone does not stop at the societal level, but includes new consumption patterns and lifestyle modifications on a personal level, too. There are countless examples, including traveling on public transport, riding a bike, becoming a vegetarian, being

engaged in neighborhood activities, and so on. The following table summarize major changes in the corporate business model and in consumer behaviors to ensure the shift.

This altogether will finally change our gravity of consciousness, where mindfulness, gratitude, humility and forgiveness will set the path toward a fairer, greener and more sustainable future. All this is not an easy task, but it will help us to better discriminate between the parallel, multiple worlds we are living in simultaneously that require different forms of responsibilities. We might conclude that instead of being observers and spectators, we already have become indispensable players who have the skin in the game. This is the planetary momentum we have right now to change the world. ■

The question is: How does this antifragile zone translate into concrete steps?

We will start considering new forms of risk management whereby "total cost analysis," which takes the liability of the entire value chain into account, becomes more relevant. This would, in consequence, honor circular "forms of economy," where we look at our business not as a river, where everything downstream is depreciated and outsourced, but rather like a lake, where we need to take potential negative externalities into account. We will begin to decouple business from globalization and reach out to more local, regional, and national clients and supply chains instead of global ones. Multi-channel supply chains and more regional markets will become key. This process of "regionalization" already started after the 2008 financial crisis. Fifty percent of China's trade is now with Asia itself, and 70 percent of the EU's trading partners are other EU members. The same is true for the Americas. This trend will continue.

In such a situation, where less efficiency and more resilience is required, we will look very carefully at the concentration and size of private businesses and ensure that they are not "too big to fail," which would force the public sector and taxpayer to bail them out when the next crisis comes around. Instead, we will favor small but high-performing businesses (from SMEs to hidden champions). This could also include new forms of regulated credit default swaps that help private companies to better hedge their risks. Taking this argument one step further would mean that there will be a renaissance of governance, administration, and regulation. This should include a new mandate for monetary regulators (green Quantitative Easing, parallel digital currencies, sovereign green bonds), a new set of antitrust laws that guarantee fair market competition, higher quality, and lower prices, especially for the digital platform economy. This renaissance of governance and regulation will put the perverse subsidies of the agricultural sector on the table and set up a new form of political economic agenda, enabling and

ensuring that system-relevant industries (healthcare, pharmaceuticals) and public affairs (research and education, public infrastructure) are properly regulated for the good of the citizens.

Where digitization will further penetrate our daily lives, our work places, and our businesses as a whole, where millions of jobs will potentially become replaced by robots and automated industries, we need to reframe the social fabric in an intelligent manner by starting to provide an unconditional basic income. This would send the message that there are no more "useless" people, instead turning them into those "needed, wanted, and required" for a new age and a new society.

In a more general sense, we will need to address the topic of commons and clarify what a private good and service is and what is better managed as a *public good*. Healthcare, education, and infrastructure are examples of the latter. This would include a shift in our energy sector away from the centralized fossil industry

The four "Rs"	Examples
Risk assessment	Total cost analysis (TCA) Taxonomy, Recording, Disclosure (ESC-criteria) Regulated credit default swaps (CDS)
Regionalization	 Decentralized energy supply and business value chains From production-based to care-based economy Circular economy Decoupling business from globalization Small is beautiful
Regulation	 Renaissance of governance (taxation, surveillance, stress tests) Redefining the commons (healthcare; education, environment) New social fabric addressing digitalization (unconditioned income) Extended central bank mandate (green QE, parallel currencies, CBDC) Avoiding, "Too big to fail" (anti-trust laws)
Reshaping behavior	Individual mobility Diet preferences Housing and living

The four "Rs": risk assessments, regionalization, regulation, and reshaping individual behavior

○ 20 Global Goals Yearbook 2020 Global Goals Yearbook 2020 21 ○