

Repurposing Economies Towards Life

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Abstract

On a global scale, the COVID-19 pandemic is far from over; we experience forest fires of frightening magnitude, floods and storms scare many people to evacuate their homes. Not only do young people say that time is running out, the latest IPCC 2021 report paints a depressing picture of our collective future and many scientists are increasingly warning of the many negative path dependencies that deteriorate our planetary life-support system. But at the fringes of the mainstream neoliberal economics with mindsets of extraction and wealth accumulation are prototypes of future economies that need to be connected and amplified. This article suggests that the paradigm shift has begun: we need to help it gain speed. Individually, but also on a global scale, people should become aware of their responsibility for a livable future. Without a fundamental change in the global and local economic operating system, the chances to restore, improve and maintain life may be impossible. It is time to go mainstream with repurposing economies. This requires transformation literacy: shifting mindsets, transforming systems and designing transformative change processes. Many authors have suggested approaches to economies of the future. What runs through all of these different approaches for a new economic operating system is the focus on social and ecological vitality. "Life economies" as an overarching term reflects most appropriately what a future can look like that operates in accordance with the needs of people and the planetary life support system. The article shows that across the variety of proposals six guiding principles for life economies come through for which prototypal actions and change processes already exist. None of the set of principles will bring about the breakthrough alone, all need to come together. The article concludes that life economies can become the strategic driver of an attitude of care and contribution.

1. Introduction: Future Pathways are opening

Billions of years of life on our planet have brought about a rather strange species, one that loves and longs to be alive, yet is equipped with the capacity to destroy each other and seriously diminish the planetary life support system—the very basis on which this species developed. Humankind seems to have become oblivious to the fact that we are nature, that we are just a stage in the ongoing process of evolution. Many protagonists of an unlimited confidence in technological development would identify themselves as the most advanced species that evolution ever produced, so advanced that in moments of omnipotence some would claim that they could steer evolution into a different direction. And indeed, this is what

humankind is doing at the moment, but probably by no means with the envisaged outcomes. Before technological advancements will have enabled earthly people to settle on Mars, the human impact on our blue planet, manifesting as climate change, irreversible biodiversity loss and ecosystem destruction, will remind us that we are not separate from nature, we are part of it. It is time to become humble partners of evolution and not its enemies.

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On a global scale, the COVID-19 pandemic is far from over, we experience forest fires of frightening magnitude, floods and storms scare many people to evacuate their homes. Not only do young people say that time is running out, the latest IPCC report* paints a depressing picture of our collective future and many scientists have been warning of "Hothouse Earth" scenarios (Steffen et al. 2018) for years. The Club of Rome's famous report "Limits to Growth" (https://www.clubofrome.org/blog-post/herrington-world-model/) has been acclaimed and ridiculed at the same time—the fate of many people with serious foresight. Only a few years after the publication of "Limits to Growth", hence 45 years ago, in the subsequent and less famous Club of Rome publication written by the Club's founder Aurelio Peccei titled "The Human Quality", the author suggests that a human revolution is necessary to change the downward spiraling developments. He wrote: "Concerted worldwide action supporting and strengthening this revolutionary movement is indispensable" (Peccei 1977, page 189). Yet today, hopefully not too late, the Kassandras and visionaries are not alone anymore.

A recent survey of the Global Commons Alliance† shows that overall, 83% of global respondents are ready to become planetary stewards to safeguard the global commons. It is a lesson in humility that people in so-called developing economies are more prepared to protect nature and climate, e.g. Indonesia (95%), South Africa (94%), China (93%), than those in so-called advanced economies, e.g. Japan (61%), Germany (70%), and the United States (74%). These results tell us it is time to remember that the strange species has so many other capacities—caring for life, its fellow human beings and the wealth of natural beauty. It can join a call to learning how to collectively steward humankind's pathways towards a regenerative civilization, one in which it becomes the norm to better understand and partner with evolution. It is time to embed technological advancement with the humility that stems from reverence for our blue planet.

This article suggests that **the paradigm shift has begun: we need to help it gain speed**. Individually, but also on a global scale, people should become aware of their responsibility

^{*} See https://www.wri.org/insights/ipcc-climate-report, accessed 11th September 2021

[†] See https://globalcommonsalliance.org/news/global-commons-alliance/global-commons-g20-survey/ accessed 10th September 2021

for a livable future. While pathways may divert and strategies need to be negotiated, it is clear that the revolutionary shift is daunting for many actors, change-makers and decision-makers: without a fundamental change in the global and local economic operating system, the chances to restore, improve and maintain the life we know may be impossible. This means it is time to go mainstream with repurposing economies.

2. A New Narrative is Emerging

The advent of the 17 Sustainable Development Goals in the year 2015 marked one important turning point, because for the first time in human history uniquely Global Goals had emerged in arduous rounds of negotiations. People may not be able to memorize all 17 goals, and there might be inherent contradictions in the objectives and indicators between the different goals, but they serve the purpose of making many more people aware of the fact that we live on this one planet together and need to move into the future collaboratively. What they have done is contribute to a global consciousness that paves the way for new insights. In order to gain speed in transformative efforts, it is important to identify what slows down or even blocks transformative efforts, or in a systems language, what keeps the old system in place, like drums beating in the background luring people into dancing according to rules that continue to deteriorate our planet. The number one element that beats such drums is our current economic system, its focus on unsustainable growth by all means, its orientation towards extraction instead of contribution, and its rules of the game that are so difficult to escape. The growth focus of the prevalent neoliberal economic framework works at the expense of nature's integrity and social cohesion. It is based on extractive mindsets and centuries of natural and human resource exploitation (Lovins et al. 2018). The overarching story of today's outdated drumbeats is simple, but powerfully ingrained in all global systems: its narrative suggests that the sole goal of the economy and of businesses is to generate financial wealth; that the freedom of the individual (person or corporation) is the primary societal value; that government should be small, protecting individuals and their private property; that markets need to be free and unrestricted, and will self-organize for the benefit of all. This current operating system assumes that resources are unrestricted. It is oblivious to planetary limits and carefully balanced geo-bio-physical life-support systems. The idea of commons that all people (and other living beings) should have access to and care about is absent. On the contrary: in the current economic system the commons can be appropriated and used for individual benefit (Bollier and Helfrich 2012; Ostrom 2009). Governments that guide or steer markets for the sake of the common good are seen as the problem; the doctrine of free markets with constant economic growth is still enshrined as governments' main goal and manifests in the tyranny of GDP increase as the single most important metric for societal progress (Hoekstra 2015; Costanza et al. 2014).

The global COVID-19 pandemic made the flaws of the current system transparent and reframed, at least the role of the public sector as a guardian of people's overall health. The pandemic raised additional questions, including how we as humans will live in greater harmony with nature in the near future. Changing the parameters of our economic system is high on the agenda, not only for the visionaries anymore, but for all those future-oriented

actors that have understood that the current framework of economics pushed us deeper into dangerous trajectories. Hence, it is time to gather the many existing approaches to new and sustainable forms of economies, and combine the promising elements. If there is a need to accelerate the speed of transformations, the key element is to look at human capacities, innovations, initiatives and collaborations that are already functioning as laboratories of the future. Connecting these fractals of a livable future would greatly advance what is so urgently needed: transformation literacy as the capability to steward transformative change across institutions, nations, cultures.

Could we rearrange our economic system in a way that it stops extracting life from the planet and instead regenerates and fosters our life support systems?

3. Repurposing Economies Towards Life Enhancement

The future needs a global economic architecture that focuses on the conditions for life on our planet and the vitality or aliveness of all living beings, including human beings, our societies, our technologies, and our knowledge. Truly well-functioning economies operate within the planetary boundaries (Rockström et al. 2009; Cornell 2012). This means, first of all, that we must understand the basic principles of what "well-functioning" will mean in future: **Economies must be life-serving.** Individual and collective well-being must be thought of together, as must be the interplay between people and nature. The core task for the future, then, is to recognize the conditions for interwoven social, economic, and ecological patterns and to continually and collaboratively ensure that these patterns enhance the vitality of local and global systems (Kuenkel 2019).

Yet, we are not starting from scratch. Many authors have suggested approaches to economies of the future that address the fundamental role of humans in the Anthropocene as responsible actors within the limits of planetary boundaries. There are concrete proposals for implementation available, some conceptually inspiring, others encouraging in practice. Nobody may have found the holy grail, but all contribute pieces to the puzzle that can ultimately create the revolutionary shift Peccei was hoping to see. Inspiring approaches to future economies include the Economy of Common Good (Felber 2018), the commons as approach to economies (Bollier and Helfrich 2012), an Economy in Service to Life (Lovins et al. 2018), the Mindful Economy (Magnuson 2007), the Sufficiency Economy (Bergsteiner and Dharmapiya 2016), the Caring Economy (Folbre 1995), the Wellbeing Economy (Fioramonti 2017), the Feminist Economy (Jacobsen 2020), the Circular Economy (Ellen MacArthur Foundation 2013), the Doughnut Economy (Raworth 2014), Economics of Arrival (Trebeck and Williams 2019), Mission Economy (Mazzucato 2021), Sustainable Economy (Reuter 2017), and many others.

What runs through all of these different approaches for a new economic operating system are themes that focus on social and ecological vitality or on what can be captured as **systems** aliveness—the capability of human and ecological systems to develop, maintain and renew vitality and resilience in mutual consistency with smaller and larger systems (see also Kuenkel and Waddock 2019):

- First, future economies include ecosystems and social vitality in their balance sheets. They incorporate boundary values of economic activity more clearly, and adopt a stewardship approach to the global and local commons.
- Second, future economies take care of fair distribution of resources, income and prosperity. Value creation includes collective value and is guided by contribution rather than extraction.
- Third, future economies are linked to forms of governance and political participation in such a way that economic development can be contextually adapted as well as negotiated and shaped in terms of individual and collective vitality.
- Fourth, future economies need thriving markets, but do not adore the unrestricted primacy of markets with little governmental steering. Instead, the role of trusted and legitimized governments is one of stewarding people's and planetary health.

4. Transformation Literacy

These four reorientations which reflect the underlying commonalities of the many suggested approaches to future economies are fundamental. Although it is clear to many that the urgent turnarounds the world needs need to be underpinned by such fundamental shifts, it takes deliberate effort to move new economic approaches from the fringes of the current economic operating system to its mainstream core process. This requires an integrated and strategic approach to transformative change. Indeed, it requires concerted action by many different actors at the same time, prototyping, testing, experimenting and innovating around different and new ways of operating in an economy that serves life. It calls for *transformation literacy*—the knowledge and capacity of collectives of individual and institutional actors to collectively steward the repurposing of economies effectively together across institutions, societal sectors and nations. The three elements of transformation literacy, as captured in table 1, are equally important—the level of mindsets, the level of systems, and the level of process—and need to be addressed at the same time (Kuenkel et al. 2020).

4.1. Mindset-shifts

Acknowledging the intrinsic relationship between people and nature (or the acceptance that we are part of nature, part of this planet) is at the core of transformations to life-enhancing economies. Unleashing the potential of human agency in stewarding economic actions away from the primacy of extraction and from dangerously altering the planetary life support system towards vital ecological and social systems must underpin transformations to a new economic architecture. Taking a stance for a collective responsibility in safeguarding the future integrity of our planet has many practical consequences, which range from changing consumption patterns to making green investments, from protecting ecosystems to expanding renewable energy systems. It also means to listen more carefully to ancient human worldviews with reverence for Mother Earth and integrate such perspectives with post-industrial rational worldview. Mindset-shifts change the way in which reality is perceived, they are the first

building block of transformation literacy towards new economic approaches that are life-enhancing.

"The understanding of what gives Life to systems is part of the foundation of a new economic architecture."

4.2. System Awareness

Much has been said about the need to adopt a systemic perspective to the great transformations that lie ahead of humankind (Capra and Luisi 2014; Kuenkel 2019). While a systems view of the world may not yet be mainstream, it is clear that in the last 20 years, recently accelerated by the global COVID-19 pandemic, many more institutional actors and decision-makers have adopted a systemic approach, even though what it means in practice has multiple different connotations and interpretations. Yet, the Newtonian worldview that sees the universe as a machine-like entity to be controlled and exploited, is still dominating the hope for technological advancements, for example, to climate change challenges. Many actors favor solutions that keep the economic systems functioning as is, but add "green" solutions, rely on technological progress or hope that the digitalization will sort out some of the threats. But despite 100 years of systems science, there is a lot we do not know yet. Identifying what keeps the current extractive economic system in place, which power structures keep it going and which levers could be used to change this downward spiraling operating system, is paramount. It is time to explore how systems must operate in future so that economic actions can deliver wellbeing on a healthy planet. Hence, systems understanding is the second building block of transformation literacy towards new economic approaches that are life-enhancing.

4.3. Process Competence

Many global change-makers highlight that the current decade is decisive for humankind's ability to halt destructive trajectories and safeguard planetary boundaries. They call for an unprecedented speed of transformation. This means not only making courageous turnaround decisions, but also orchestrating and implementing successful transformative change processes at all levels of the global society. Knowledge and competence for transformative change have increased and have been practiced in multi-actor partnerships, cross-sector-collaboration and global alliances (Kuenkel et al. 2020; Kuenkel 2019; Kuenkel and Waddock 2019; Loorbach et al. 2016; Goepel 2016; SITRA 2016). These approaches are inspired by systems view of the world and by mindsets of interconnectedness, and they need to find avenues into the very structures that hold the old system in place. The successful design of transformative change requires new knowledge about the patterns and dynamics of human interaction systems, of collective leadership and collective stewardship. Process competence is a skill so essential for *transformation literacy* that it cannot be delegated to specialists. It is needed at scale. Designing transformations is a task that, in future, many decision-makers and change agents need to master.

Table 1: Building Blocks of Transformation Literacy (adapted from Kuenkel et al. 2020, copyright by the author)

MINDSET	An understanding of the world's complex interconnectedness and relational co-construction in which human agency acknowledges its co-evolutionary pathways with each other and the Earth.
SYSTEM	An understanding of future systems that build regenerative civilizations and safeguard life support systems in their political, social and economic aspects.
PROCESS	An understanding of the processes required to bring about transformations, hence the collective competence to design and implement effective large-scale transformative change processes at multiple levels with multiple stakeholders.

5. Guiding Principles for Life Economies

Even with new mindsets, system understanding and process competence, shifting the global economic operating system is not an easy task, yet it needs to happen much faster than most realize. For the exponential acceleration we need there is a lot to learn from the innovative transitions that are already taking place at the fringe of the mainstream systems: responsible value chains, circular strategies, sharing economies, value-oriented banking, regenerative communities, or decentralized renewables, among many others. The modification and remodeling of our economic system have already begun. The essence of transformation literacy is the ability to knit the new into the old—a lesson that can be learned from evolutionary processes (Alexander 2005). Repurposing our economies means building the new while the old is still in operation, insert strings and prototypes for a better way of operating into the existing structures, organizations and procedures. But this does not mean renovating the old, and saving the neoliberal doctrine of capitalism. It means taking repurposing economies seriously and connecting and scaling those economic approaches that work towards regenerating, maintaining and safeguarding Life on Earth.

Can we, together, acknowledge useful elements of the outdated economic system, amplify the promising new economic approaches, connect the underlying principles and re-purpose economies so that they take us and our planet into the future?

It is important to note that as much as there is agreement about the necessity of a fundamental shift in economics, the future may require a plurality in approaches. A new economic architecture needs to leave space for different manifestations, as long as they follow the principle of enabling and maintaining vital systems of life, and as long as they are based on the idea that humankind and nature are inextricably linked. *Life economies* as

an overarching term reflects most appropriately what the future can look like. Economies which are in service to *Life* operate in accordance with the needs of the planetary life support system, the planetary boundaries respectively. They are guided by multiple frameworks that safeguard the commons and balance the wellbeing of individuals and the collective. Hence, the understanding of what gives *Life* to systems is part of the foundation of a new economic architecture (Kuenkel and Waddock 2019). There are many attempts to define principles, properties or criteria that should guide a new economic system: they intend to not only halt the current negative path dependencies, but redirect the goal of economic activities away from what is perceived as an outdated growth paradigm towards a contribution to Life. Quite a few authors have entered this new territory in thinking and suggested principles that should guide new economic approaches (Fath et al. 2019, Parker & Ragnarsdottir 2021, Fullerton 2015, Raworth 2014, Wellbeing Economy Alliance*: Future Fit Foundation Guide, 2019; Lovins et al. 2018; Mazzucato 2021, Jackson 2016, Korten 2015, Kelly 2012, Jacobs 2002, Jorgensen et al. 2015, Leading4Wellbeing 2017). Although the level of principles suggested differs and the authors highlight different aspects of what it would mean to operate in economies in service to Life, the underlying commonalities are striking. Across the variety of proposals, six guiding principles for life economies can be identified that reflect operational aspects guiding the functioning of future economies. The guiding principles for life economies shown in Figure 1 and summarized in Table 2, are fundamental propositions that govern behavior in future economies. Such guiding principles inform and inspire, but they do not prescribe action. Moreover, if one looks closely at the many approaches and activities that are already happening around new ways of operating, it becomes clear that most of these guiding principles are already used. Pieces of the puzzle and building blocks of future economies are already in existence, prototyped, tested in real laboratories or at least conceptualized. These building blocks are happening across the entire global and societal spectrum, in corporations and small and medium-scale companies, in governments and municipalities, in the non-profit sector driving projects and in research and education. If the many moves in the right direction that already exists could be connected with each other and scaled, we would come closer to shifting the entire system.

Table 2: Guiding Principles, Features and Practices

1. Regeneration and Circularity	Production and consumption cycles are socially embedded and have net-zero negative impact or regenerate life-support systems.
2. Localization and Contextuality	Economic activities are contextually adapted and strengthen regional cycles.
3. Adaptability and Innovation	Learning mechanisms foster life-enhancing technological and social innovation

^{*} See https://weall.org/

4. Transparency and Accountability	Reporting mechanisms and metrics create awareness of and track systems' vitality
5. Participation and Distribution	Governance and distributive measures guide wellbeing for all and ensure gender and social equity.
6. Regulation and Contribution	Voluntary and obligatory agreements safeguard commons and contribute to the vitality of social and ecological life-support systems.

Figure 1: Six Guiding Principles for Life Economies can be scaled to shift the entire system.



5.1. Regeneration and Circularity

Summary: Production and consumption cycles are socially embedded and have net-zero negative impact or regenerate life-support systems. This carries through all products and value chains, but also applies to services. Ecosystems are cherished, social systems cultivated.

Regeneration and circularity most often refer to the ecological flow of resources and materials. They need to be produced and consumed so that either waste is turned into new products, the use of products has no waste, or consumed products are biodegradable. Prototypal approaches are, for example, cradle-to-cradle approaches; circularity of materials; biodegradable products; zero-waste approaches; carbon-neutral strategies; net-zero strategies; regenerative investments; circular cities; national circular economy roadmaps, regenerative finance; and many more. As part of these principles, nature is seen as a guide for production and consumption in its regenerative capacity and circularity, but also in the limitation of usage, reusage and maintenance. Prototypal approaches that incorporate nature's wisdom are regenerative or organic agriculture; agroecology; nature conservation and ecosystem restoration; soil management; forest protection and reforestation; rewilding; allocating land portions for nature and national parks; nature-based solutions; land and resources entrusted, not-owned; solidarity agriculture; valuation of ecosystem services; carbon-capture in land management; regenerative and renewable energy systems; or responsible agricultural value chains. Yet, regeneration and circularity also refer to social systems; they need to be constructed in a way that social services, care work, arts and culture as well as services to the society are not only recognized, but valued as indispensable elements of regeneration and mutual support that enhances the vitality and resilience of societies. Prototypal approaches are care economy approaches, social entrepreneurship; service to society; reproductive activities valued; or arts and culture support. Although still far away from becoming mainstream, the global trend to integrate these principles in government strategies is undeniable. Prototypal actions are city-based or national Circular Economy roadmaps (SITRA 2016; MacArthur Foundation 2013), country-wide renewable energy strategies; citizens' energy cooperatives; policies for the advancement of regenerative agriculture or the protection of biodiversity and natural habitats. Only few of these approaches integrate the second element of societal care, as for example Feminist Economy (Jacobson 2020) and Caring Economy (Folbre 1995) as fundamental. Arts and culture, today, in life economies, are acknowledged as a crucial link between their culturally diverse societal regenerative effects and economy.

5.2. Localization and Contextuality

Summary: Economic activities are contextually adapted, locally negotiated and strengthen regional cycles. Globalization and regional cycles are appropriately balanced. Economies are responsive to cultural value systems.

Localization and contextuality acknowledge the potential of local or regional economic cycles (including what is still today framed as the informal sector). They not only thrive on cultural diversity, but also connect people in networks of mutually beneficial relationships. Future economies are locally embedded and adjusted to local needs. Prototypal approaches

already exist in the form of locally embedded economic cycles; regional bio-economies; community-based economic entities; shared ownership (cooperatives); from ownership of goods to sharing products; or locally governed commons. Globalization has not only had negative effects and massively contributed to an understanding of the world as a whole, global value chains with exploitative working conditions, high waste production, high energy usage for logistics, or resource depletion have become negative trajectories that localization and contextuality can counteract. Humankind has always traded across the world, and will do so in future, but *life economies* will require showing the true costs of resources and logistics, and calculate the internalization of costs into products. Global value chains will continue to operate, but in a responsible fashion with trusted relationships, and still strengthening regional economic cycles. Prototypes heading in this direction are responsible commodity value chains, healthy balance between small, medium and large economic entities; strengthening of small-scale farmers and small producers; inclusion of weaker and marginalized communities.

5.3. Adaptability and Innovation

Summary: Learning mechanisms foster life-enhancing technological and social innovation. Cross-institutional learning takes place locally as well as globally. Governments and corporations invest in life-enhancing innovations.

Adaptability and innovation refer to human inventiveness in future economies, to the capabilities for excellence and the creativity of social and technological innovations. Prototypal approaches exist already in the form of regenerative product innovation; zerowaste technologies, carbon-capture methodologies that are nature-based; guided technological innovation; digitalization technologies that support regeneration and circularity. Innovation and adaptability nurture an aspect of the free-market doctrine that is worth keeping—the commitment to quality and the role of healthy competition to achieve it. Despite the current ignorance of markets towards environmental and social impacts, the saying that the market rewards mastery is valid. Prototypal approaches can be found in resource efficiency; quality standards; valued social innovation; social entrepreneurship; impact investing; business purpose oriented towards value for societies and ecosystems. In future economies, product quality will have the additional meaning of including net-zero impact on the environment if not a positive contribution. The question, 'is what we invent life-enhancing'? will guide market freedom and inventiveness. Adaptability as a principle refers back to the way economies embed individual, collective, societal and global learning mechanisms, because these determine the capability to adjust pathways.

5.4. Transparency and Accountability

Summary: Reporting mechanisms and metrics create awareness of and track systems' vitality. Societal progress indicators include a variety of aspects that measure social and environmental wellbeing. Transparency and accountability in economies create trust, which in turn reduces the transaction costs of societies.

Transparency and accountability underscore learning mechanisms. Measuring progress towards life-enhancing economic action is crucially important, and without the responsibility

of economic actors, be they private, public, collectively owned or civil society actors, to reveal their impact on social and environment issues, life economies cannot thrive. Prototypal approaches exemplifying these principles are reporting standards; product traceability; transparent tax systems; or progress measurements that reflect contribution to society and ecosystems. The recent years have seen a proliferation of reporting mechanisms for companies*, environmental or social target setting and accountability procedures[†], and demands for the traceability of goods[‡]. The shift towards life-enhancing economic action requires more than not doing harm or compliance with minimal legal standards. The future will link the license to operate not only for business, but all forms of enterprise (such as public and not-for-profit) to their net positive impact on people and nature. Whether this means, reinvestment of a certain portion of profits into regenerative activities, the legally anchored accountability of enterprises to social or societal development, or fundamental questioning of negative path dependencies of entire profit logic (Hinton 2021). Transparency and accountability coupled with the other principles, is the route to awareness, learning and measuring of progress. Already existing examples of this are wide array of wellbeing and sustainability indicators; the ESG criteria for sustainable investments standards; the internalization of social and environmental costs; business accountability for environmental and social impact; or digitalization that helps create transparency of economic activities.

5.5. Participation and Distribution

Summary: Governance mechanisms and participation in economic decision-making strengthen citizens' and employees' ability to influence purpose and impact of economic actions. Distributive measures and appropriate guidance of markets safeguard societal equality, guide wellbeing for all and ensure gender and social equity.

Participation and distribution are intrinsically linked. As principles they provide a framework for economic activities that guides action, informs behavior. Closing income inequality gap is a matter of political choice-making to influence the freedom of markets and close tax loops nationally and internationally. History has shown manifold since industrialization that heedless free markets do not solve social and environmental problems that they cause (Mazzucato 2021). Market dynamics historically play a role in advancing living conditions, but only if the state plays a strong role in ensuring wealth distribution through market guidance and tax systems. Strong and trusted states with transparent governance are indispensable for life economies (Nair 2018). Not necessarily only tax systems count, it is the good governance, the absence of corrupt economic activities, the support for small and medium-sized enterprises or cooperatives, the advancement of community owned enterprises, or technology guidance for regenerative and renewable production lines, or national strategies for circular economies, which set frameworks that are life-enhancing. Prototypal approaches that already exist are for example, wealth distribution measures;

^{*} Most known is the Global Reporting Initiative. Accessed 3rd June 2021: https://www.globalreporting.org

[†] Examples are the "Science-based Target Network", "The Capitals Coalition" accessed 3rd June 2021: https://capitalscoalition.org; or the "Future-fit Foundation" accessed 3rd June 2021: https://future-fitbusiness.org

[‡] Examples are the Fairtrade Standards or the Forest Stewardship Council, which most paper and packaging companies have already adopted with its traceability requirements.

distributive tax systems; public participation in economically relevant strategies; democratic control of economic development and strategies; participatory corporate governance models; social and racial equity as guide for economic activities. European countries gave evidence to the intrinsically linked connections between low rates of inequality, high democratic participation, environmental regulations and redistributive tax systems (OECD 2013; O'Neill et al. 2018).* In Asia, income inequalities have been rising significantly between 1990 and 2019.† The many implications of the deeply ingrained introduction of neoliberal free market narratives globally have taken its toll on social disparities. However, *life economies* require a serious turnaround for income inequality gaps. Poverty as much as power and wealth monopolization deteriorates the resilience of societies and their capability to respond to future challenges. *Life economies* function best with reliable participation of communities and citizens in the development of economic priorities that serve people and nature. Prototypes that can be scaled, already exist, such as broad access to education and political participation; use of digitalization for participation and tracking of ecosystems and social systems' health; peer-to-peer learning mechanisms; or affirmative action.

"Regulatory approaches such as constitutions, laws, standards and regulations are important, but only work if norms and values for economic activities are anchored in narratives of lifeenhancement."

5.6. Regulation and Contribution

Summary: Voluntary and obligatory agreements (including resource allocations) safeguard commons and contribute to the vitality of social and ecological life-support systems. Constitutional laws as well as business and land management laws reflect the importance of everybody's responsibility for the future.

Regulation and contribution refer not only to the role of strong and well-governed states that underpin the operating system of life economies. They address the human capability to jointly find agreements that regulate the relationship between the individual and the collective, and between people and the non-human world—a faculty which has always existed in human history, albeit more or less impactful. In addition to the other principles, the currently dangerous trajectories of climate change and deteriorating life-support systems require binding global agreements. The UN Climate Change Conferences are an example of humankind walking in the right direction, although many may rightly argue that both outcomes and implementation are too slow to halt the current negative trajectories. Safeguarding the commons and arriving at new understandings of prosperity require various different and legitimized instruments of regulatory approaches. Prototypal approaches are happening in

^{*} Even in Europe the share of income of the top 10% has risen to 35% in 2019 with increasing tendency.

[†] For example: share of income of the top 10% has risen in India from 30% to 56%, in China from 28% to 40% Source: https://wid.world/news-article/2020-regional-updates/ accessed 10th September 2021

the discourse around finance systems in service of society and nature; tax incentive systems that safeguard nature, commons, and social equity; regulations and laws that create level playing fields for business regarding human rights, workers' rights and rights of nature; fiscal policies that incentivize regenerative investments; acknowledging rights of nature or the establishment of an ecocide law. However, regulations need to go hand in hand with mindsets and customs of *contribution*. Repurposing business as contributors to societies' and ecosystems' vitality is a mindset shift requiring a farewell to neoliberal doctrines and re-invigorating the human capability to care and collaborate. Regulatory approaches such as constitutions, laws, standards and regulations are important, but only work if norms and values for economic activities are anchored in narratives of life-enhancement. The economic guiding function of strong and democratically legitimized states is to ensure that economies do what their purpose is—to contribute to a quality of life that spans across humankind and includes all species. The core question of 'how do we contribute to life' is a constant orientation and re-orientation. Various manifestations of prototypal approaches are already existing such as embedding future responsibility in constitutional laws, business laws and land management laws; sustainable public procurements guidance; obligatory contribution of economic entities to societal wellbeing and progress; laws governing businesses that include the new life-enhancing and common good purpose; universal basic income; commons dividends; or taxing resources rather than workers or people.

6. Conclusions: Connecting the Future

The guiding principles for *life economies* show that attempts to establish such economies already exist, but need to be amplified and accelerated. Given the deeply ingrained mindsets of extraction and wealth accumulation as the core element of current economies, this is a daunting task, which requires a huge collective effort. All prototypal approaches count, because they engender learning and contribute pieces to the puzzle. Yet, none of the set of principles will bring the breakthrough alone, all need to come together. Future life economies need to be responsive to all principles at the same time. Moreover, they need to be connected in intelligent ways and linked to the underlying new narrative of lifeenhancement. Enhancing transformation literacy means to connect people with the vision of life-serving economies and foster the ability of multiple actors from local to global level to radically change the way economies operate. This may at times be incremental: in the dissemination of emotionally compelling future narratives, and the powerful connection of movements, initiatives and pathways. But it also includes scaling people's ability to design and implement transformative change process that model the future way of operating. Whether climate change and the planetary emergency situations have taken us towards near collapse, or whether the patchwork of promising shifts will move us towards a positive tipping point of transformative change, cannot be answered at this point (Otto et al 2020). What is undeniably clear is that power concentrations including economic power, without checks and balances, have a life-deteriorating effect, hence do not serve life economies. They undermine almost all of the above-mentioned principles. Refocusing economic narratives towards life-enhancement suggests a fundamental reorientation towards addressing power imbalances. In addition, the potential for a different future may be growing right there at the edges of the current system, where the most marginalized people live. Truly focusing on *Life* may reach actors of the global society for whom issues like climate change and planetary emergencies have no meaning, because they struggle with much more apparent problems. Hopefully, not everybody needs to travel into space like Amazon's CEO Bezos did, in order to realize that we need to take care of our fragile planet*, because it is the only home we have so far.† As the Global Commons Alliance survey‡ shows, many people have understood that this immensely beautiful yet tiny fragile planet has a delicate life support system that we need to take care of. Very practically *life economies* can become the strategic driver of an attitude of care and contribution. Scaling these practices will shift the entire system towards a future we can reasonably hand over to the next generation.

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^{*} Source accessed 10th September 2021 https://www.space.com/jeff-bezos-blue-origin-spaceflight-earth-fragility

[†] See "The Pale Blue Dot". Sources accessed 10th September 2021: https://youtu.be/GO5FwsblpT8

[‡] See (accessed 11th September 2021): https://globalcommonsalliance.org

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