Blueprint Series 2019-2022

Blueprint 9: Educational Transformation

7 Transformative Learning Perspectives for Regeneration and Thrivability

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0. FRONT MATTER

0.1 EXECUTIVE SUMMARY

Welcome to the Educational Transformation Blueprint of r3.0, also referred to as BP9. This Blueprint serves to inspire, catalyze, and support the necessary inner and outer learning of transformational change for regeneration and thrivability. This is the ninth Blueprint in the r3.0 work ecosystem of Blueprints, which shares the stories, perspectives, and suggestions of an eclectic group of educators, economists, evolutionary scientists, transformation facilitators, and system designers. This Blueprint formed over a period of 9 months, which included as always an extensive literature review, several online meetings for key inputs from February-July 2021, as we met under the banner of r3.0.

The Blueprint journey started by focussing on educational transformation for a regenerative and distributive economy. However, it quickly became evident that this approach was too narrow and analytic. The lead author, Anneloes Smitsman, thus proposed to shift our focus from education to learning, and from analysis to developing awareness for understanding. This shift in focus was welcomed by the co-authors and members of the working group, which resulted in the Blueprint you are reading now. This shift in focus and process is illustrative of the key recommendations that have emerged from this Blueprint, as well as the purpose this Blueprint serves. Out of this transformative learning exploration also emerged 7 transformative Learning Perspectives, which forms the integral framework and structure for this Blueprint. Each transformative Learning Perspective is further explored through three key areas to provide further context (see section 0.1.1). These Learning Perspectives also offer an in-depth exploration of the multi-dimensional nature of systemic transformational change for regeneration and thrivability.

By intentionally embarking on this deeper transformational change process ourselves and in community with others, we will together develop the new learning capacities and understanding that are required for this time of catalytic changes. In other words, we can’t teach these new capacities in silo or as an abstraction, nor can anyone learn this process for us. Nothing less than the fundamental transformation of our human conceptions of sharing our lives on this planet are required if we are to shift the trajectories towards collapse and extinction that we are now heading towards.

Learning is an internal process that nobody can do for us, yet it can be facilitated, supported, and inspired. Learning has to be lived, felt, and experienced for it to mature into the nourishing fruits of wisdom and understanding. Accordingly, learning for sustainability, regeneration and thrivability is not the same as learning about these concepts. Without our inner and systemic transformations, our personal and collective learning processes will not give rise to the kinds of understanding and capacities that are required to address the multiple catalytic changes now upon us. Furthermore, by sharing our experiences, discoveries, and questions, and learning from each other, we build the bridges of empathy, mutuality and reciprocity that so many are missing in our mainstream mechanistic societal systems. We thus encourage you to read and share this Blueprint as a living journey and an ongoing conversation to which you can invite others to join you.
0.1.1 What we mean by Regeneration and Thrivability

Regeneration is the act of healing, improving, and enhancing a place, system, or relationship with the healthy flows and thrivable conditions for life. Life as a whole and most natural living systems and organisms are regenerative by design and in behaviour. Yet we as the human species have decoupled ourselves from these regenerative operating principles by creating systems and impacts that are not regenerative, and thus also not sustainable. Regeneration is an unfolding dynamic process and a journey that reconnects our humanity with the larger web of life and the universe.

Regeneration is a critical and key responsibility for our species at this tipping point of life on earth, which begins by acknowledging the extensive damage and imbalances that our human actions have caused and are costing life on earth. Regeneration and learning for regeneration should become a primary concern of education, yet in many places and institutions it is not. Regeneration as a focus also implies and places upon us ethics of care and stewardship, as an unfolding dialectic of inner and outer transformation.

Thrivability includes regeneration and yet expands this further by also focussing on new conditions for our future evolution. Thrivability, i.e. our ability to thrive, has many different meanings and associations and can serve as both a vision and a promise. Although thrivability is commonly associated with our ability to flourish, be happy, and fulfilled, we consider thrivability as systemic and intrinsic to life. Thrivability as a developmental process focuses on learning how to create systemic capacities and conditions for becoming future creative, life-affirming, and possibility increasing. Thrivability as an evolutionary learning process not only restores, regenerates, and heals what has become injured, weakened or damaged but also creates the conditions for the emergence of new possibilities and futures.

The focus of this Blueprint is to help us develop the awareness, understanding, and capacities for regeneration and thrivability. We consider this to be the essence of what education should be about and for. To prepare us to mature and wisen as a regenerative and thrivable species by empowering us with the capacities and awareness for becoming better stewards of our planet, our commons, and our shared future wellbeing.
0.1.2 Seven Learning Perspectives for Regeneration and Thrivability

The seven interconnected Learning Perspectives of this Blueprint form the foundation for the inner and outer shifts towards regeneration and thrivability. These Learning Perspectives are further explored through three key contexts, which give rise to 21 unique and interconnected transformative learning perspectives of transformational change for regeneration and thrivability. These perspectives are here summarized below:

1. **Learning as Context** – The Anthropocene, the Noosphere, and A New Renaissance.
   - Provides essential conditions and attractors for transformative learning and for inspiring our personal and societal development towards regeneration and thrivability.

2. **Learning as Life** – Three Evolutionary Principles of Life, Five Stages of Transformational Change, and Five Syntony Spheres of Evolutionary Learning Ecosystems.
   - Provides necessary foundations for developing our ecological literacies and ecosystemic capacities for regeneration and thrivability.

3. **Learning as Future** – Cosmology of Futures, Imaginal Capacities, Futures Literacies.
   - Provides necessary foundations for developing our future literacies and imaginal capacities for regeneration and thrivability.

   - Provides necessary foundations for developing our agency capacities for stewarding regeneration and thrivability.

5. **Learning as Connection** – Learning as a Connective Pattern, Digital connections and the role of AI and VR, and Learning Feedback.
   - Provides essential inquiries for developing our digital literacies, connective capacities, and regenerative feedback systems for creating thrivable learning systems.

6. **Learning as Story** – Learning as Story in Place, the Mythic Structures of Learning, and how to create New Stories of Learning.
   - Provide necessary foundations for developing conscious communication, depth perception, and sense-making capacities and for becoming the story creators for regeneration and thrivability.

7. **Learning as Community** – Becoming a Global Learning Community, Bioregional Learning Communities, Weaving the Mycelia Networks of Future Education.
   - Provides the necessary foundations for developing community based global consciousness that is life centered and future inspired, as well as for the development of collaborative capacities to become caretakers and stewards of our commons – our world and future.
0.1.3 We are all Learners on the Path of Regeneration and Thrivability

These 7 Learning Perspectives have been carefully articulated to shift our consciousness to becoming more receptive to the flows and interconnections of life, and to help us (re)connect with the ancient and future wisdoms that inspire a more whole and inclusive human development. Rather than thinking about all that is offered through this Blueprint we invite you to live into these new questions, perspectives and ideas together with us. This Blueprint is an experiential learning journey, which does not seek answers but rather a deeper comprehension of what is asked of us for this time. A clarion call to enter the heart of our humanity and listen to the feedback of life and the call of our future.

We communicate this journey in the form of an allegory that forms the key elements of our Blueprint narratives, namely A Sailing Voyage to the Land of Thrivability. Accordingly, each of the chapters shares short sections from our Sea Voyage Journal, with anecdotal stories that bring to life the various explorations and inputs in the co-creation of this Blueprint.

By starting each chapter with a narrative from our Sea Voyage Journal you are invited to enter into the various consciousness states and perspectives that form part of the Learning Perspectives of that chapter. We hope in this way to build the foundations for a more integral understanding out of which collective and coherent actions for our world and future can emerge, and be sustained. It is thus our intention and conviction that we can each and together become catalysts for our personal and societal transformations. And it is precisely this transformative potential that this Blueprint aims to activate, develop, and nurture.

Accordingly, we have written this Blueprint for a wide audience, to ensure it is not limited to only those working in the various fields of education. Moreover, we propose that on this learning journey towards a regenerative and thrivable future we are all learners on the path, which dissolves common and persistent dualities in education between teachers as experts and students as learners. In other words, this Blueprint is written for all of us as learners on this path of systemic change, including ourselves.

The Learning Perspectives also offer many new perspectives of what we understand by concepts such as; evolution, holism, thrivability, futures, information, wholeness, and the deeper cosmology of life from a living systems perspective. These perspectives also provide vital contexts for becoming more conscious of the multiple dynamics of change and tipping point potentials that are active in our world right now. Furthermore, these new perspectives raise awareness of future trends, such as the increasing digitization of education and society. The pressure for major transformative changes are growing by the day. This is a critical time to be alive on Earth where our actions and inactions have far reaching consequences for decades to come. Now more than ever we need to develop our collaborative learning capacities and push the edge of what education can become.

Our own evolution as a species is hinging on the intersection of multiple crossroads, which raises the critical question whether mainstream education is able to prepare us for who we are to become in order to address the enormous challenges now upon us. It also raises the following questions, which are at the heart of this Blueprint:

● How does what we learn and how we learn catalyze the required personal as well as collective transformations of our assumptions, habits, attitudes, and actions?
● And how does formal and informal education support and prepare people to access and develop their future potentials of a new kind of civilization that is life-centered and ecological by design?
● Is education inviting us to explore what it means to consciously influence how we evolve as a species during this time of unprecedented changes?
0.1.4 A Milestone for r3.0

The Educational Transformation Blueprint forms a major milestone for r3.0 and comes at a critical time for humanity and our planet, during which we are each challenged to learn in whole new ways and contexts. This Blueprint forms part of the first generation of nine Blueprints that define the r3.0 Work Ecosystem, which is aimed at delivering a full set of generic Blueprints for co-creating maturation pathways towards regenerative and distributive economies of thrivable civilizations. This Blueprint is also catalyzing a second generation of Blueprints, which are to be developed from 2023 onwards.

Each Blueprint follows a due process, which is explained in section 0.2. In this Blueprint we have been both participants as well as co-authors of a learning process that takes us into the heart of what is needing and seeking to transform, starting from within. Accordingly, we have gained a deeper understanding of our personal as well as our collective learning journeys, and how this applies to necessary transformations in educational and other societal systems. In particular, where this concerns how to better leverage existing conditions and possibilities for regenerative and thrivable trajectories. For education to become regenerative and thrivable, a major shift in attitude, behaviour, worldviews, and consciousness is required.

This Blueprint thus offers a radical new approach by placing consciousness at the forefront of our work in sustainability and regeneration. This includes the simulation of new and regenerative consciousness states as well as a deeper exploration of the fundamental role of consciousness in learning and development, from a cosmological perspective. In other words, this is not just a Blueprint for reading about what needs to change in education, but is rather a journey for entering into the new consciousness states and perspectives that empower transformative learning for regenerative actions. And in particular, for developing a radically new understanding of our roles and responsibilities as humans on a finite and interdependent planet. This Blueprint also offers pathways for the needed transformative capacities for this tipping point time, grounded in holistic awareness and wisdom (rather than just knowledge). These pathways are offered by weaving together multiple perspectives, narratives, practices, and exercises for the needed transformation of self and society.

0.1.5 How to Work with this Blueprint

This Blueprint is best read, received, and worked with as a journey of heart and mind. Although we have done our best to write this blueprint for multiple audiences, backgrounds, ages, and cultures, we do understand that some people may find some of the concepts that are introduced here complex or challenging. While acknowledging that reducing unnecessary complexity is important, we purposefully have not reduced complexity to superficiality. The existential crisis we are in now is complex, and so is human behaviour and systemic change.

Surface suggestions and superficial ideas will not help us to develop the deep learning and regenerative capacities that are needed now, in fact it may only make things worse. We, thus, ask for your patience and openness if ever you feel challenged with some of the ideas that are proposed through this Blueprint. To allow time and space for integrating and digesting the multiple layers and levels of learning and unlearning that may get triggered through this Blueprint process. We have had to do this also for ourselves, by allowing new understandings to emerge and by easing and releasing our own expectations and set ideas of this process (see section 1.3.1). We have also added a helpful glossary in chapter 10, to make it easier to understand some of these complex terminologies.
0.1.6 Key Recommendations

The Blueprint learning journey is summarized in chapter 9 in the form of 13 key recommendations that each of us can practice, apply, and contextualize. Learning begins with listening and receiving feedback, accordingly we start the first recommendation by listening deeply to the feedback of life and our world – i.e. to pause and become aware of what is going on and why. There are multiple systemic barriers in the ways we have grown and developed our human worlds, which also persist in education and the ways people learn (or rather do not learn) from the essential feedback that life and our world provides. Addressing systemic thrivability barriers is a key component of educational transformation, which also requires facilitation of transformative learning contexts by facilitating learning as a process of life.

Moreover, it is essential that we learn how to engage the potentials of thrivable future by developing future creative and imaginal capacities, which are currently lacking in many mainstream educational programs. Unless we learn how to design our systems for regeneration and thrivability, our worst nightmares will become the realities that our children will inherit from us. Accordingly, it is critical that we learn to initiate third way approaches that transform the duality traps that have divided and polarized so many of our communities and relationships. This begins by empowering collaborative agency and learning how to communicate patterns that connect. Becoming the systems we wish to live in starts by acting as a thrivable learning community, now. We bring our futures into being through who we are and how we act today.

Transformational change for regeneration and thrivability is a long and challenging journey, especially now as our climate crisis is worsening. This journey in many ways is also a deep initiation and a rite of passage at the species levels of our human development. By celebrating the transition moments during this rite of passage, and the emergence of new perspectives and capacities, we learn to harvest the fruits of wisdom and compassion that will emerge from this deeper learning process. And most importantly, if we learn how to invest in the future of life and a thriving world, we will co-create the necessary resources and support systems and become the required people for this time. These recommendations are here summarized below as well as in section 9.2:

1. Listen to the feedback of life and our planet.
2. Address systemic thrivability barriers.
3. Provide transformative learning contexts.
4. Facilitate learning as a process of life.
5. Imaginally explore our future potentials.
6. Develop future creative learning systems.
7. Design for regeneration and thrivability.
8. Initiate and nurture third way approaches.
9. Empower collaborative agency.
10. Communicate patterns that connect.
11. Act as a thrivable learning community.
12. Celebrate the rites of passage moments.
13. Invest in the future of life and a thriving world.
0.2 BACKGROUND ON THE R3.0 BLUEPRINT DUE PROCESS

This Blueprint is the ninth in the r3.0 Blueprint series, and the last of four in the Second Phase of Blueprint development (2019–2022), with the exception of a Blueprint on Funding the Governance of System Transformation, which will be published as BP8 in 2022. As a global common good, pre-competitive, market-making not-for-profit organization, r3.0 has created a templated process for creating Blueprints in diverse fields that identify: 1) current practices, and 2) current ambitions of the field in question, which are then compared to 3) necessary ambition (based on science and ethics) for spurring the emergence of a regenerative and distributive economy.

In other words, the Blueprints conduct gap analysis. The Blueprints then backcast from the desired future on the far side of the gap to propose a set of recommendations of hands-on approaches that different actors can take to fill the gaps, thus building foundations for the sustainable structures of a new and regenerative economy (Robinson, 1982, 1988, 2003).

r3.0 piloted this process during a first phase (2015–2019), which included Blueprints on 21st Century Reporting, Accounting, Data, and New Business Models, plus a fifth Transformation Journey Blueprint that synthesizes these first four into an implementation framework to trigger necessary societal transformations. The second phase covers the fields of Sustainable Finance, Value Cycles, Funding Governance for System Transformation, and Education, which is the one you are reading now.

0.2.1 Blueprint Due Process

The templated due process that r3.0 has developed centers around a Working Group (WG) of 20-40 global experts who gather for a 9-12-month development process of vetting recommendations and the Blueprints overall, inviting input at several critical moments:

- **Draft Content Index**: r3.0 authors draft a Content Index to introduce the key concepts to be covered, as well as the overall structure and scope of the Blueprint, with WG members assessing for focus and completeness; WG members also indicate special interest areas and suggest materials for the literature and practice review.
- **Exposure Draft One**: r3.0 authors then produce a first full Exposure Draft, which WG members evaluate through two types of convenings:
  - **In-Person Meeting One**: WG members who can attend meet virtually or face-to-face to discuss the First Exposure Draft, providing critical early feedback on direction.
  - **Virtual Dialogue**: All WG members are invited to a one-week, asynchronous virtual dialogue hosted on the Currnt online engagement platform, where they engage via text commentary through a set of prompts for critical feedback.
- **Exposure Draft Two**: taking into account feedback from the first In-Person or virtual Meeting and Virtual Dialogue, r3.0 authors produce a second Exposure Draft that introduces the formal Recommendations, which is exposed to two forms of formal input:
  - **In-Person Meeting Two**: a second In-Person Meeting takes place, typically on a different continent from the first In-Person Meeting to enhance geographic diversity, to prepare the Blueprint for final publication. During Covid-19, this meeting had to be organised virtually as well.
  - **Public Comment Period**: The second Exposure Draft is released publicly for a one-month Public Comment Period, enabling both formal and informal input opportunities.
- **Final Blueprint**: A final version of the Blueprint is released at the annual r3.0 Conference, and made freely available on the r3.0 Website.

1 Due to the COVID-19 pandemic, all the planned in-person meetings became virtual meetings only.
0.3 AUDIENCE

The following section offers a more differentiated or multi-levelled perspective for who we consider as part of the “target audiences” for this Blueprint. All r3.0 Blueprints return to audiences in their last chapter to articulate recommendations for the identified audiences. The r3.0 methodology for all of our products and services is based on the following 5 concentric scales: nano, micro, meso, macro, and supra. We applied a similar focus for articulating the clusters of our audiences for this Blueprint, which became: 1) self and family, 2) communities, 3) bioregions, 4) planet, and 5) cosmos.

We start by emphasizing our personal learning opportunities and responsibilities, and how we can live this with our families, which is the nano focus. Our focus then spirals out to include the communities we form part of, which is the micro level. As we connect more deeply with the ecologies of the places in which we live and extend our efforts collaboratively with others who form part of these shared ecologies, our focus becomes bioregional, which is the meso level of learning. Eventually, we hope to become aware of ourselves as citizens of the Earth rather than nations, by developing a planetary consciousness and focus, which enters us into the macro level of learning. As our consciousness matures and develops further we become aware of ourselves as cosmic beings, who belong to the universe, and develop cosmic or universal consciousness which grounds us in a profound sense of unity with all life, which enters us into the supra level of learning and being.

The below provides a more detailed description of these various audiences in 5 categories, as interwoven levels of learning and development. These 5 categories are further integrated in chapter 9, and in particular section 9.2, where these are contextualized for the summary recommendations. While these 5 categories are described as nested levels of learning, development, and human organization, we want to emphasize here how these 5 levels exist as seed potentials in every individual and every living system. In other words, the human journey of learning, development, and evolution itself unfolds and fractals out from the nano, micro, meso, macro, and supra, to then fold back onto itself. Our human journey of growing in consciousness and becoming more aware, is aided by exploring each of these interwoven realities.

Accordingly, the integral approach of this Blueprint with respect to ‘audience,’ also helps us to shift beyond the more conventional institutional focus of transformational change, while at the same time offering a developmental focus that is inclusive of institutions and other forms of systems that form part of our learning ecologies. By doing so we also acknowledge how education cannot be confined to institutionalized forms of learning or limited to schools and universities only. Life is education, and in a digitally connected world with new normals and future unknowns, what is understood by education and required of learning is changing rapidly, and pushing the boundaries in multiple and often conflicting ways.

This Blueprint integrates these five interconnected levels in section 9.3 through a self-evaluation exercise for applying the key recommendations from each of the earlier chapters that are summarized in section 9.2.

0.3.1 Nano level – self and family

Learning is continuous from the moment of our conception until we exhale our last breath, and beyond. Life is learning and learning is universal. Learning is not something that you can delegate to someone else. Machines or other people cannot learn for you, they may provide answers, directions, and perhaps even solutions, yet only you can learn what this means or implies. More fundamentally, learning begins at the level of the self. By virtue of being alive you are gifted with innate learning potentials and capacities, which is what the nano level of learning explores and supports. “Life-long learning” has become a popular mantra, especially for the myriad of companies that seek to sell educational services. And yet this is not what we mean by referring to learning as a continuous and innately directed process.
The nano level of learning also includes our personal and inner development, including capacities for ‘learning how to learn’, as well as our developing self awareness and relational skills for interacting with others. The nano level of learning, although innately driven, can be greatly enhanced through formal and informal education. Furthermore, our first experience and triggers for learning begins within our families. This Blueprint directly speaks to each of us at the nanolevel by supporting our personal learning process, even just by reading this Blueprint. For those who like to dive deeper, there are also plenty of practices and exercises in this Blueprint that can support the development of essential skills, understanding and new competencies. Finally, it is useful to realize how within the nano level of our learning potential already exist the seeds and potentials for each of the subsequent levels. We will become conscious of these other levels as soon as we start to extend ourselves and become more outwardly aware and engaged within our communities, bioregions, planet, and finally the cosmos itself.

0.3.2 Micro level – community learning

The next level of learning, and thus audience, is the micro-level which is community based. With ‘community’ we mean groups and collectives of people in a given surrounding or virtually or online, who share common connections and purpose, including organisations, networks, and commons (whether centralized or decentralized). Within formal organisations, learning and development is often centrally organized through HR and similar functions to whom are assigned the task of organizing the educational needs of the members of the organization. This audience too is included in this Blueprint and in particular the systemic transformation strategies and group processes that form part of this Blueprint can offer much value when applied.

Furthermore, the Blueprint aims to support and inspire a larger planetary narrative of learning, to explore more deeply what it means to learn as a community, as a group of people, and how to develop a sense of unity within our diversity. This Blueprint offers many practices, processes, and inquiries for developing community awareness, openness to new and different perspectives, and community transformation.

0.3.3 Meso-level – bioregional learning

When we extend our focus from human communities to the community of life that form part of the ecologies of our shared habitats, we enter into the bioregional level of learning. The bioregional focus of learning is a newly emerging meso pattern of decentralized self-organization, which brings life into the classroom and our classrooms into nature. The majority of organized learning environments at the macro level are still institutionalized at national or regional levels, without this bioregional and ecological focus.

The bioregional awareness transcends the rigid boundaries and regulations of nation-states, which are still predominantly focussed on coordinating and distributing education through public authorities and registered agencies with formal curricula and standardized testing. In many democracies, education at the state level is attributed to a Ministry of Education. The bioregional initiatives of learning and education often fall outside formal funding avenues and can be severely constrained in resource mobilization for these new forms of learning. Accordingly, many bioregional learning centres have to rely on voluntary or philanthropic funding. Or else, are forced to become privatized which often excludes a broader base of learners from less economically privileged groups and poor(er) communities.

Furthermore, meso levels of learning in the conventional societal contexts tend to happen at the level of multinational corporations with profit-maximisation pursuits. This has resulted in the development of an ‘industry’ or ‘factory’ model of education, which is precisely what requires transformation. Bioregional education requires entirely new infrastructures and support systems, which this Blueprint supports the exploration for.
0.3.4 Macro-level - planetary learning

The next level of learning is what we refer to as the planetary context or macro-level. Marco levels of organized learning are currently driven by international relations between nation-states and continental governments, often without this deeper planetary consciousness. Just like the meso level of organized learning without bioregionalism leads to nationally institutionalized forms of education, the macro level of organized learning leads to internationally institutionalized forms of education. A typical example of institutionalized macro-level organization is the United Nations. However, the planetary and thus macro level of learning that is proposed through this Blueprint emerges not from international cooperation between nation-states and governments, but rather from bioregional collaborations that scale and network to form a larger collective ecology of learning. This is a vitally different direction for the emergence of collective learning and yet probably one of the most important emerging trends to be aware of and help prototype, steward, or pilot.

Planetary learning requires planetary consciousness, which is not the same as international consciousness. Planetary consciousness emerges from a deep sense of connectedness with the ecologies of life, which this Blueprint offers in great depth. Planetary consciousness and planetary learning is co-learning with Gaia. Through this Blueprint we offer a myriad ways for developing and exploring what it means to be planetary beings alive in a universe of consciousness; a universe that is coherent as a single unified entity and not a random collection of separate parts, particles and stellar bodies. Planetary learning invites us to explore our symbiosis with Gaia as living systems within living systems. This Blueprint offers many narratives, practices, exercises for exploring our relationship with nature as nature.

0.3.5 Supra-level - cosmic learning

The supral level of learning relates to the development of our cosmic consciousness or cosmological awareness of what it means to be human within the larger universal contexts of being. Cosmic learning unfolds naturally from a developing planetary consciousness, which is when we become aware of the cosmic or implicate orders of consciousness within nature and all living systems. In chapters 3 and 4 of this Blueprint, we explore this cosmological perspective of learning and development in-depth, which interestingly lands us right back into the nano within which the potentials of the supra become embedded.

At the supra-level the organizational pattern mimics the evolutionary patterns of the universe itself, and we start to realize how life is a unified reality at all scales and levels of existence. The distinctions between nano, micro, meso, and macro then fall away as we become aware how each is nested within one another as an unfolding spiralling process that is continuous and integrative. It is precisely this supra-level of learning and development that we as a species need to understand in greater depth, and learn to apply in the design and growth models of our societies. It is precisely our lack of understanding of these universal patterns and the supra-level of coding within the nano, micro, meso, and macro expressions of life, that caused (in our view) the sustainability crisis that we have brought upon ourselves and our planet. Accordingly, this Blueprint offers a radical new insight about the informational patterns of learning and development from a living systems perspective that is cosmologically informed, and thus inclusive of the nano-micro-meso-macro-supra as a whole.

Finally, this Blueprint proposes the practical realization of our prior unity not as a spiritual ideal or utopian idealism, but as a concrete realization for the foundation of transformative learning and the necessity for educational transformation. In particular where this concerns the systems, cultures, behaviours, and worldviews that are not regenerative and cause harm to life on earth.
1. INTRODUCTION

Join us now to embark on the transformative learning journey that forms part of BP9. Let us begin. As mentioned in the executive summary, the purpose for this blueprint is to inspire, catalyze, and support a much needed shift in the role and focus of education towards developing our transformative capacities for regeneration and thrivability. Major inner and outer shifts are required in our perspectives, understanding, attitudes, expectations, behaviours, and actions for safeguarding the present and future wellbeing of life on earth. Without this, the survival of our own and many other species is not guaranteed. Never before has learning and education become this important for developing our navigational capacities during this catalytic time of compounding tipping points. This includes preparing humanity for what we have set in motion by destabilizing our climate systems and damaging our biodiversity, and to catalyze the required actions for preventing the worst case scenarios from happening by shifting gears and trajectories now towards regeneration and thrivability.

As mentioned by the recent 6th IPCC landmark report, this is “code red” for humanity.² We have now entered a climate emergency and all the conditions for a perfect storm are brewing as major planetary thresholds are being exceeded leading to unstoppable escalation events.³ These last months of June, July, and August 2021 have seen even further unprecedented climate disasters in the forms of unstoppable fires, devastating floods, earthquakes, unprecedented heat waves, and more. This trend is not new, yet it is increasing and accelerating as a steady trend that is directly related to our human actions and inactions. Many children today are asking: “why despite knowing the dangers and getting the early warnings did we not learn and listen to avoid all this suffering?” How do we answer their questions? Why did we not learn from the feedback that life was giving us, and why do we continue to persist on trajectories of collapse? We cannot answer these questions artificially or superficially, this is the deepest learning process that we as a species have ever had to embark on. We propose to answer those fundamental questions as a quest, by embarking on this as a transformative learning journey that is essentially a rite of passage. By answering the call of the quest, the call to become the future humans of regenerative and thrivable civilizations, we will become the needed transformation through which we will be able to develop the capacities, resources, and understanding for how to cross the valley of death and regenerate the lands of the living.

Transformative learning in conditions of danger, fear, and breakdown can be highly challenging, even more so when fight-flight survival mechanisms are triggered that can inhibit the kinds of deep transformative learnings that are required for addressing the root causes of our compounding sustainability crisis. At the heart of our sustainability crisis is a human crisis, a crisis of human comprehension and maturation. We are destroying the planet who gave us life and sustains us.

We also invite you to enter into this transformation journey as a living conversation, rather than a set of recommendations about who and what in education needs to change. Many of such reports and Blueprints already exist, and often do little more than adding to the lists of analysis about what and who needs to change, without taking the change inwards. This Blueprint offers an in-depth exploration of transformative learning through seven interconnected Learning Perspectives that form the foundation for our inner and outer shifts towards regeneration and thrivability.

1.1 HOW TO WORK WITH THIS BLUEPRINT

This Blueprint includes nine chapters. The first chapter sets the stage for our journey and introduces us to the key themes, as well as the nature of the journey itself. Chapters 2-8 include 7 transformative Learning Perspectives, which together form an integral framework for educational transformation and learning for regeneration and thrivability. Each Learning Perspective is explored through a three-fold structure that offers various dimensions of each theme. The full Blueprint is summarized through a list of recommendations in chapter 9. A glossary is available in chapter 10, for a quick(er) understanding of some of the key terminologies that are used through this Blueprint.

1.1.1 A Unifying Framework through 7 Learning Perspectives

The 7 Learning Perspectives form a thematic unifying framework that integrates all the diverse inputs from the working group members. Each Learning Perspective is explored through diverse contexts, principles, reflections, ideas, narratives, and suggestions that can be applied for co-creating regenerative ecologies of learning. These seven Learning Perspectives have been kept sufficiently broad and universal for these inquiries to be contextualized and applied to varying (cultural) backgrounds, as well as for awareness building and curriculum redesign. The Learning Perspectives are:

1. Learning as Context.
2. Learning as Life.
3. Learning as Future.
4. Learning as Agency.
5. Learning as Connection.
7. Learning as Community.

These seven transformative perspectives can be applied to curriculum redesign, as part of transformative learning conversations, and most importantly for creating the learning spaces that invite reflection and inquiry through which emerge new levels and ways of understanding and action. It is our hope that by developing and deepening the context and possibilities for learning through these seven perspectives, that learning can become more meaningful, experiential, relevant, and thus also more transformative for this time of significant change.
1.2 THE FOCUS AND INTENTION FOR THIS BLUEPRINT

The aim and intention for this Blueprint is to inspire and empower the necessary inner and outer learning shifts that can move us towards trajectories of regeneration and ultimately thrivability. Such shifts require a major transformation in the way learning is currently taking place (and envisioned) as well as new ways for initiating and inspiring the kind of transformative learning that leads to the necessary behavioural change. These inner and outer shifts will also require a major commitment, individually and collectively, to address the root causes of the multiple crises we are in. Although this collective challenge requires that we each play our role and responsibility to bring forth this necessary shift, it is also important to realize how the burden of inaction and the cost of harm continues to fall on those most vulnerable, including our planet.

At the forefront of the larger trajectory shifts that the r3.0 Blueprints advocate are necessary inner shifts in terms of our personal and collective consciousness (de Witt, 2016; Ives et al., 2020). These consciousness shifts will not come about through a predominantly intellectual or goal-oriented process, not even the UN Sustainable Development Goals.

Although the focus of this Blueprint is not on exploring 'what is consciousness,' we acknowledge how our states of consciousness can directly contribute to the problems as well as the solutions for the pressing issues of our human development. We cannot learn without consciousness and our states of consciousness directly impact how and what we learn. Explore and experiment how your states of consciousness shift while you read this Blueprint, and notice what shifts in others as you invite others to join you on this learning discovery. Consciousness is primary to life and learning is not limited to humans. Consciousness is what we share and who we all are (Currivan 2017; Smitsman and Houston, 2021). As working group member Suparna Diwakar mentioned, “In some cultures, like the Indic cultures, a realisation of this consciousness is even regarded as the very purpose of learning and life.”

Mathematician and physicist Sir Roger Penrose explained in his research on consciousness that whatever “it” is, consciousness is somehow related to “understanding” and it is not “computational” (Penrose, 2020). Consciousness is also at the forefront of transformation, as the famous saying goes by Albert Einstein: “We cannot solve our problems with the same thinking we used when we created them”. Apparently, Einstein also said: “Education is what remains after one has forgotten what one has learned in school.”

In this same spirit, it is our hope that “what remains” from reading this Blueprint is a deeper understanding through new perspectives and more importantly the means and ways to become the required humans for this time. As we shift our consciousness into the states of regeneration and thrivability, we may also discover the ways to change the behaviours and actions that have been harming and inhibiting this.
1.2.1 A New Focus and Approach in the r3.0 Blueprint Series

This Blueprint journey is part of a larger journey of whole systems transformational change. The overall focus for this r3.0 Blueprint builds on each of the earlier r3.0 Blueprints, namely the why, how, and what of transformational change of our societies, and in particular our economic and financial systems. This Blueprint also adds a new focus to the Blueprint series, which is the inclusion of storytelling with imaginal and reflective spaces and opportunities for developing our collective understanding (and not just our knowledge of the issues and possible solutions).

We chose not to limit our focus to one particular audience and instead built on the 4-tier approach that is at the core of r3.0’s methodology – nano, micro, meso, and macro – and added a 5th tier namely the supra (cosmological). As mentioned in the executive summary, this Blueprint is not just for people working in education or systems change. It is for all of us who seek to understand how we can co-create a world with greater care for life, a world in which we can all thrive together.

Knowing that our states of consciousness influence how we receive and experience what we read, we have thus also sought new ways for communicating the information and wisdom that forms part of this Blueprint. We recommend letting all that is shared through this Blueprint come to you by letting it simmer. Especially for those sections that may appear new, challenging, or too complex to understand initially.

For some it may seem odd that we write about consciousness in a Blueprint like this, and in particular when dealing with topics such as sustainability, systems change, and educational transformation. We hold the view that by placing the primacy of consciousness at the forefront of sustainability and systems change we can begin to address humanity’s conceived duality between mind and matter that is at the root of our sustainability crises. We will elaborate more on this in later chapters. By placing consciousness as fundamental to reality and understanding (as indicated by Sir Penrose), we start from the fundamental condition for learning and development. During our online working group meetings we have also experimented how shifting our own states of consciousness helped us to access new perspectives and levels of understanding, for example through future visioning sessions and explorative dialogues (see chapter 4).

As mentioned earlier, our focus for this Blueprint is to support the development of deeper, more compassionate, and systemic understandings of ourselves and the nature of the challenges that call for new ways of learning, being, and acting. This is a different focus from the search for answers, solutions, and recommendations. Understanding emerges first and foremost from processes of inquiry and discovery, which also reveal why not every form of learning leads to understanding. In other words, the conditions for the emergence of understanding cannot be forced or imposed. We cannot force a child to understand, and when we try we may soon find out how this blocks the child’s capacities for understanding. Education from this perspective is much more about creating the conditions conducive for learning to emerge, i.e. acting as a gardener, rather than as an instructor (Biesta, 2020; Pisters, et al., 2019). Learning for understanding is not the same as learning for knowing. If you are working in the field of education or as a learning facilitator, explore how you can invite learning as a journey towards understanding (not answers) through the inquiries, reflections, stories, and transformative learning processes that form part of this Blueprint.

For those who are familiar with the other r3.0 Blueprints you may already start to experience how the focus and tone of this Blueprint is slightly different from the advocating role of the earlier Blueprints. It is our intention that the seven perspectives of this Blueprint help to integrate and expand all the work of the earlier Blueprints, which provide the steps and walking tools for the large climb from basecamp to the mountain top. This Blueprint is once again a transformation journey, similar to BP5, yet this time we are not embarking on a mountain climb, but rather on a sailing trip to a mysterious new land with all kinds of challenges along the way. You can read more about this allegory in section 1.3.
To summarize, it is our intention to inspire a deeper and more subtle change process through this Blueprint, one that invites exploration of the horizons of new understandings that lay beyond the boundaries of our mind. Accordingly, this Blueprint has less of an advocating role and is itself a transformative learning journey where we invite the unknown, improbable and even the seemingly impossible by moving outside the scope of our conditioned forms of knowing.

This Blueprint also serves as a navigational tool and sense-making map to embrace the many complexities of learning that are at the core of what is required to shift our societal trajectories of collapse and unsustainability. When navigating the seas by boat, a tiny shift in coordinates can make the difference between missing an entire continent, as Columbus found out long ago, or discovering new lands. The new horizons that we aim to explore through this Blueprint require first of all an inner shift in our coordinates and perspectives. We will be setting sail for the coordinates and premises of thrivable civilizations with regenerative and distributive economies and a governance of stewardship. Join us now on our Sailing Voyage to the Land of Thrivability, by reading from our Sea Voyage Journal, which continues at the start of chapters 2-8.

1.3 THE BP9 ALLEGORY – A SAILING VOYAGE TO THE LAND OF THRIVABILITY

The Sea Voyage Journal – The Journey Begins

Our journey towards regeneration and thrivability started in the harbour of a place that represents much of what isn’t working in our world. Massive pollution, people, animals and nature dying and suffering from all kinds of causes, including violence, viral infections, and lack of nutrients. People can’t agree on the priorities and there is an overall lack of leadership through a culture of blame, selfishness, and a growing lack of trust. Instead of creating conditions for health and wellbeing, people are trying to manage the many problems they are faced with by bandaging their situations and finding distractions to escape in virtual reality games where all seems wonderful and exciting.

A small group of “positive mavericks” (as we like to call ourselves) decided to pioneer new ways for rebuilding and regenerating our world, especially after realizing how many of our messages fell on deaf ears. Some of us also felt frustrated about the lack of receptiveness to our messages with all that mental noise and the many emotional tensions. A sense that our pleas for major transformation are often left unheard. We even wondered whether some of our efforts are perceived as a threat and criticism of the status quo.

With a sense of growing desperation about the worsening crises of our world, our group of mavericks felt determined to find better ways; ways that are not just sustainable but also regenerative and eventually thriving. We also understood that we had to adopt new methods of communication in order to reach more people. After several tribulations and a series of unusual events, we decided to embark on a quest for new visions, perspectives, and first and foremost a deeper understanding of the kinds of changes that are required for helping our world. We understood that our own transformation is part of this process, and not only individually yet especially as a collective journey of co-learning, co-discovery, and co-creation. Some of us had heard of a far away land, it might be a continent or perhaps even an island, where people discovered valuable ways and means for healing and regenerating our world.

A few of us even received potent dreams and visions of this new civilization, which revealed how these people learned from the crisis that is still bringing many of us to the brink of collapse. Somehow these people became wiser and more caring, instead of more devious and cunning in an attempt to escape the hard consequences of our crisis.
We felt the call of this thrivable civilization and how it may offer clues, and perhaps even medicines, new perspectives, and new ways of understanding that can be of tremendous value for our world in peril. We realized that this far away land also represents the inner land of our own wisdom nature, and as some may say “the seat of consciousness itself”. Many before us searched for a kind of ‘Shambhala’, and yet those who may have found it tend not to speak of it. In other words, we decided it’s time for us to embark ourselves on this journey; both inwardly and outwardly.

Some of us had already gone through the challenging mountain climb of earlier r3.0 Blueprinting journeys, and came equipped with the maps and navigational tools from these prior journeys. Yet, we weren’t sure whether these earlier maps and tools would help the last stretch of our journey. We were warned that finding the coordinates of the harbour to this new land is the greatest challenge of all. We had no outer coordinates to navigate by for discovering where this harbour is situated or how to enter it to meet this new civilization. It seemed deep trust in the journey itself was required.

What started all this is a message in a bottle that Anneloes found washed ashore on a beach near our ship. The message read: “One cannot enter the land of thrivability you seek from the old states of consciousness that created the problems you need to resolve.”

A deep conversation unfolded among us as we reflected together on this message.

“Is this new civilization also searching for us? A message in a bottle? Was that really most effective? Surely, a phone call would have been easier.” Raz suggested.

“They trusted the tides of change to deliver their message, perhaps we should too.” Alexander replied.

“Why should this now be about my state of consciousness? And how do we even know what kind of consciousness is required to enter that so-called promised land? What if this message didn’t come from this new civilization and it’s just a prank from a child with a rich imagination who dropped it in the water. I suggest we stay here and try to figure out what to do with our world from here.” One of our team members exclaimed, who preferred to stay anonymous.

“I think we tried that already,” Bill sighed.

“I think this is exactly what’s required. Our own state of consciousness is the key to what happens next. Indeed, we don’t know if any of this is true, and we don’t know what we’re embarking on, but staying here and hoping for things to work out is no longer an option. We’re out of time. It is close to midnight, and unless we radically change our ways and embrace the unknown, nature will force the path for us.” Dave pitched in.

We all sighed deeply as we realized this is it. It’s time to embark and let the path guide us and become part of the transformation that’s required. We knew that where we’re going there are no guidelines or handbooks to “produce” the appropriate states of consciousness and the best competencies, or the ready-made solutions. Anneloes turned the page from this message in the bottle, and shared what was written on the back:

“The journey will shift your consciousness, the coordinates of the harbour you seek are already within. Trust the process and explore the following seven learning perspectives to guide the way: Learning as Context, Learning as Life, Learning as Future, Learning as Agency, Learning as Connection, Learning as Story, and Learning as Community. When you integrate each of these perspectives together, a new understanding will emerge that will reveal the coordinates you require. We will know when you’re nearing the harbour, and you’ll then find one of our pilots to guide you further.”
With some trepidation, much uncertainty, and yet also a sense of adventure we embarked shortly after and left the harbour of our wasteland. We have since set sail towards this land of thrivability and the Blueprint you are reading now is part of our journey. Along the way we have faced many challenges, and even more questions than when we began. Some of us even claimed to have seen demons and frightening sea monsters, the sea can have that kind of effect...

There have also been many sweet “aha” and “wow” moments that deeply silenced our minds, followed by heated discussions as we explored the various perspectives of ‘Learning as Context’:

“No, we are in the Anthropocene, can’t you see these enormous sustainability problems we are faced with? Our world will never be the same again, and all because humans decided to radically alter our natural world.” Ralph shared passionately.

“Well, I don’t see it like that. I think it is all part of the Noosphere, we are evolving in consciousness and moving towards a unity point, even though it may seem like we are more divided than ever.” Shweta replied.

“Uh, could it be that both perspectives are true, and we are actually in a new Renaissance period, a rebirth of self and society? It might even be that this sustainability crisis was needed to catalyse our next stage in evolutionary development.” Anneloes suggested.

And so our journey continued. Then came the shortage of food on board...

“Where is your agency to act? Do something, anything, I am starving!” “Stop telling me what to do, did you learn how to fish? I don’t.”

“Well, I am not the one who packed our supplies, I can’t believe you assumed that relying on packaged food was going to sustain us all the way.”

“Stop arguing, who here knows how to fish?”

“Do I need to kill the fish as well?”

“Uhm, I hate to be the bringer of bad news here, but we may have a slight problem...Most of the fish in this part of our ocean died years ago. Any other solutions?”

And so began our in-depth discovery of ‘Learning as Life’, ‘Learning as Agency’ and ‘Learning as Community’.

While sailing we continued to journal and share our experiences with the world through multiple channels. Our exploration of ‘Learning as Story’ and ‘Learning as Connection’ became most useful in that process. We made the world part of our learning discoveries. Our voyage continues, we’re still on the way. We did manage to resolve our food shortage problem with the help of some unexpected visitors. It made our previous ideas about a regenerative and distributive economy a whole lot more concrete. This Blueprint has emerged from our journey, and we invite you now to join this journey, which is really the quest of our time.

Along the way, we also had to learn how to deal with feelings of disappointment, anger, fear, frustration, sadness, and the most difficult of all ‘scepticism’. It became evident that ‘scepticism’ is the most toxic emotion, which produces a tightening of the heart and thus a closing of the mind, especially in those who are more prone to this disposition. We soon found out how scepticism also restricts our capacity to learn and is essentially a defense mechanism against the pain of disappointment.
Frankly, we are still in the midst of our emotional learning journey. Some of us are discovering how this dimension of transformation is more challenging than sailing through rough waves. Emotional waves have a tendency to rock the boat of our assumptions, beliefs, and habits, which can feel most uncomfortable.

Oh, and then there was the odd traveler... He had bought himself a ticket for a cruise ship, yet misread the time. Typical. When the traveler arrived at the same harbour as where we were, he discovered that his cruise ship had left hours ago. Desperately searching for a solution, he persuaded us to bring him along on the first leg of our journey. The plan was to sail to the nearest harbour from where he could join his cruise ship and continue along the journey he had planned. And we should have known better, we're no longer in a time when things go as planned. The Universe clearly had something else in mind. Long story short, we never made it to that first harbour. Just as we were about to enter, we learned that the harbour was closed due to new Covid lockdown regulations.

This odd traveler was most unhappy about this unexpected turn of events, and we're still stuck with him. 'Learning as Future' and 'Learning as Life' have become even more relevant now. We'll share the story of this odd traveler with his cruise ship ticket another time. We truly wish he had the r3.0 Sustainable Finance Blueprint before he bought his ticket! If you are still hoping to gain a seat at cruise ship Earth, you may want to read this particular Blueprint sooner rather than later. More from our voyage soon. Onwards we go.

1.3.1 A Turning Point Moment

As you may have understood by now, BP9 continues to be a work in progress with more questions than answers. In a time of much uncertainty people generally like answers and clarity, and yet it is precisely during those times that trust in our learning capacities, and life itself, becomes more important. We started our Blueprint process with a stock-taking of what doesn’t work and requires transformation, followed by an exploration of possible, impossible, and desired futures. Yet upon attempting to integrate the various and diverse inputs of many of our working group members, the lead author decided that a radically new approach was called for. Based on the inputs of several members asking for more space for questions, with less focus on solutions, as well space for the emergence of our own developing realizations, the lead author shifted the structure of this exploration into the format it has become now. Yes, women have a way of shifting structures and modalities when you least expect it!

When space opened up for the journey itself, the focus of the seven transformative learning perspectives emerged, which then became the integral framework and base structure for this Blueprint. The new perspectives that emerge from transformative learning tend to live beyond the horizons of our conventional and habitual ways of seeing, thinking, and perceiving, and thus require a deeper tuning to what is seeking to emerge. An inner shift in intention and focus is required in order to more fully enter into transformative learning, it is not something we can study as if it is happening out there or to others. We need to become available to this process ourselves first.
The value you will gain from this Blueprint is directly related to the quality of your intention and focus; to how you are reading what is shared and your state of consciousness. As we shift our focus to understanding and awareness we enter the heart of what education and learning is all about. Our own turning point on this journey is in many ways indicative and illustrative of what learning for regeneration and thrivability asks of us:

1. **The first shift** that was called for was a shift in our focus – This happened by acknowledging more deeply how we and our world are already transforming, and in ways we don’t even know or understand yet. By shifting our focus from what we thought needed to transform to how transformation is happening, we became more intimately part of the process of transformation itself.

2. **The second shift** that was called for was a shift in our expectations – This happened by letting go of needing to write a Blueprint with answers, recommendations, and a critical analysis of what in education needs to transform. By releasing our former expectations we were able to enter more deeply into this learning process.

3. **The third shift** that was called for was a shift in communication – This happened by allowing the process of transformative learning to inform us of what needed to be seen, experienced, integrated, and acknowledged. Now instead of communicating about transformative learning, we started to communicate from transformative learning. This also enabled us to become more aware of how to attune our consciousness and develop our capacities for regeneration and thrivability.

The seven learning perspectives emerged from this process, which together form a journey for exploring the possible, impossible and desired futures, as well as the deeper learning that is called for – personally, institutionally, and collectively in both formal and non-formal education and beyond. As the reader, you can now join this journey by exploring how you support, inform, and even catalyze the necessary and deeper transformations of our systems, cultures, frameworks, models, and practices so we may become future wise and not just future literate.

### 1.3.2 Making Space for Emergence

How can we become the learners out of which emerge the new futures of a regenerative and thrivable world?

A recurring theme in our conversations centered around the idea that, “we are the world that we create together.” This understanding is also reflected in the concept of “the Noosphere” by Vladimir Vernadsky and Pierre Teilhard de Chardin, as the emergence of a kind of planetary consciousness when the process of biological evolution shifts to social evolution (see Chapter 2, section 2.2). By understanding our world as an emerging process in consciousness, we can radically shift our approach of learning and transformation. For example, by changing the narrative from striving to ‘fix the world out there’ and ‘changing the people we consider a problem,’ to ‘becoming the required people for the world we seek to live in.’ The following reflections from some of our working groups members illustrates this further:

**Henk Hadders:** “We’re part of one collective soul. The transformative journey is the shift from me to we, and from we to all of us. The shift to practice new ways of being and thinking and unlearn many things to learn anew. We’re really on the brink of a new way of thinking about sustainability.”

**Suparna Diwakar:** “The possibility of evolution is implied – consciousness goes through that process all the time. The way the Universe knows itself is through our manifestation. There is a law of nature that is universal and is followed by the universal consciousness also: consciousness, life, and the laws that encompass nature. How does this connect with education and educational processes? How do you help people to remember this? How through the process of learning do we help unravel this sense of consciousness here and now?”
Dave Pendle: “The political, social, and technological fragmentations and dissociations are so pervasive in the current epoch, that they are easily overlooked and taken for granted as a non-negotiable form of reality. The only corrective to this in my view, is exposure to experience the inherent wholeness and unity, through experiential immersion of anything that can still the mind and make its activity more transparent to the experiencer. These experiences will soften rampant self preoccupation, excessive anxiety and/or the tendency towards compulsive self assertion and over ambition. I think an appreciation and recognition of the ultimacy of consciousness, however it is presented, is critically important.”

1.4 THE WHY OF EDUCATIONAL TRANSFORMATION

The ‘why’ of ‘educational transformation’ is directly related to our societal change and development. Although many societal changes have brought a greater quality of life to many more people with access to facilities and technologies that have helped to improve their standard of living, there are also consequences to our societal change trajectories that cannot be ignored.

Our societal growth and development exceeds the carrying capacities (planetary boundaries) of our planet, and furthermore we have destroyed more than fifty percent of our biodiversity, which has now resulted in a “code red” climate and biodiversity emergency. Our future has become less secure and safe as a result of our growth models and behaviours. For hundreds of years we have prioritized economic growth over wellbeing, and sought progress and success in quantitative ways, at the cost of our planetary health and biodiversity (Baue and Thurm, 2020). We have turned our planet into a commodity, and at best a natural capital, rather than valuing our planet as a living being and the condition for us to exist as human beings. As explained eloquently by economist Hazel Henderson:

“Clearly, economics has always been about power, control over others and natural resources, influencing human relationships, culture, politics and laws in most societies. It has produced the narrow globalization of markets and today’s global financial casino still inflicting daily damage on global ecosystems and local communities. Economic theories see efficient societies as those where market completion means almost every human transaction is conducted in money and tracked by macroeconomic statistics. This is almost as insane as communist goals of having governments own all the means of production! It’s time to get beyond the last century’s Cold War between capitalism, communism, socialism, libertarianism and all these oversimplifying ideologies of “left” and “right”.”


Despite an increase in formal literacies and access to schools worldwide, we continue to exceed the carrying capacities of our planet and move more deeply into trajectories of collapse. Even more so when education follows a similar doctrine as the narrow economics that Hazel Henderson described above. Our mainstream economic archetypes of unlimited and extractive economic growth are the result of many combined and often unquestioned choices, priorities, expectations, and assumptions about life that result from a long historical process of normalization (Thurm, 2021).⁣ This process of ‘normalization’ and ‘habituation’ is often summarized under the concept of a ‘worldview’, ‘gestalt’, or ‘mindset’. ₢ However, by naming this as ‘a worldview’, ‘gestalt’ or ‘mindset’, we risk creating yet another ‘it’ to which we attribute the power to significantly influence the way we make decisions and direct our lives.

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⁣ Otto Scharmer typifies these as the blind spot or hidden sources of continuing to create a world nobody wants. [https://www.ottoscharmer.com/sites/default/files/2003_TheBlindSpot.pdf](https://www.ottoscharmer.com/sites/default/files/2003_TheBlindSpot.pdf)

For centuries economic goals and interests have been driving the goals, priorities, and resources of what education can and should be focusing on. The transformation of education requires the transformation of our economic systems as part of a common strategy and commitment. Our current sustainability crisis reveals starkly how free-market mechanisms cannot provide the course directions for moving away from the current collapse trajectories (Fullerton, 2019). In other words, the whole notion of a free market is not free at all and has brought compounding ecological debts and biodiversity costs (Henderson, 2021).

Despite knowing the issues, we haven’t been able or willing to do what is necessary for securing our planetary and future wellbeing. This raises the following questions concerning educational transformation:

1. Is the future possibility of a regenerative and thrivable world sufficiently appealing and realizable for engaging people on a personal and collective learning journey for regeneration and thriving?
2. How can education become an attractor and enabling condition for the inner and outer shifts towards regeneration and thriving?
3. What are we teaching new learners about the ways of life on planet Earth and the modus operandi for their and our success and wellbeing?

The trajectories of collapse have a long history of many unintended consequences and persistent denial of alternative options. We have economized and monetized almost every sphere of life, as well as the places in which we live, meet, and learn. Many schools have been reduced to learning factories, with focus on standardized testing, ranking, and rigid learning outcomes and methods (Chase, 2014a). Learning for regeneration and thriving requires both new ways of learning as well as new ways for engaging learning, and in particular learning processes for developing a holistic awareness and systemic capacities. This also includes learning from emerging futures, instead of using only reflective hindsight and focus on behaviour modification. In particular, learning how to sense the dynamics of the systems we form part of and learning how to sense what is seeking to be born. Becoming aware of the underlying unity within our growing complexity and how to work with the nonlinearity of complexity.

The call for educational transformation applies not only to formal education, but also to informal education and life-long learning programs (Spencer-Keyse, et al., 2020; Sterling, 2002; Zahidi, Saadia, et al. 2020; Rieckmann, 2018). In particular the linking and collaboration between the various formal and informal educational initiatives, which is further explored in Chapter 6 "Learning as Connection" and Chapter 7 "Learning as Community".

One of the members of this working group pointed out that, "Systemic change needs a radical mind shift. Behaviour of current and future leaders and building broader awareness in society can be empowered by changes in curricula at schools and universities." The twelve leverage points of Donella Meadows indicate how a small shift at the right place of the intersections of complexity can produce significant changes for the system (and society) as a whole (Meadows, 1999). Meadows also indicated how "the shift of mindset or paradigm" is the most impactful leverage point, out of which the goals, power distributions, structure, rules, and cultures emerge (see also Abson et al., 2017).
1.4.1 The Purpose of Education

We hold the view that the core purpose of education is to facilitate our human development as a regenerative and future creative process of life, by:

1. Developing our awareness, understanding, and capacities for regeneration and thrivability.
2. Honouring the earth as the home we share and by learning from the feedback of life.
3. Becoming the systems, cultures, and civilizations for a thrivable world and future.

This educational context applies to our personal as well as the larger collective spheres of learning that include our societies, organizations, cultures, and communities. Learning and development are essentially transformative processes, whether this takes place at the nano level of a group of cells, the roots systems of plants, our human journey, or the cosmic level of galaxies. We are life and the nature of life is change and transformation through learning and development.

Unfortunately, mainstream education has become stifled in so many places by the mechanistic economic goals we have imposed on it, which run contrary to the processes and rhythms of life. These mechanistic goals are turning schools into learning factories with standardized curricula and tests. When mechanistic economic goals direct the purpose of education, learning becomes monetized and trapped in paradigms, worldviews, and norms that inhibit our ecological development. This also raises the question whether education in its current form, and with the pressures and expectations we have imposed upon it, can act in a transformative capacity. Perhaps, a starting point is to free education from needing to be the solution and answer to all our problems.6

Telling a person they “must” transform and “become the solution” isn’t helping their transformation; if anything it hinders it. There has been so much talk and focus on the transformation of education and the education of transformation that many well intended transformative initiatives have become the very barriers for the required and desired transformations. It appears education has itself become entangled in the constrictive dynamics and forces that hinder our world from becoming all it can be. In the words of Stephen Sterling:

“If education is to be an agent of change, it has itself to be the subject of change. […]. While a new discourse on repurposing education is arising in some circles, a dangerous disconnect remains between Westernized formal education systems and the dynamic social learning needed in this watershed moment. The world of institutions, concerned largely with income and status in a competitive market, is on a collision course with the larger world, which faces an existential threat to human survival and the integrity of the biosphere underpinning all life. How do we rapidly recalibrate education so that it serves rather than undermines the future?”

~ Stephen Sterling (2021)

If the purpose of education is to become the heart that fuels our transformation and serves our future, it is essential that we understand what connects and disconnects us through this process. In Africa it is said that it takes a whole village to raise a child, equally it takes a whole global learning community to raise humans with the capacities, understanding, and commitment to become regenerative people of thrivable worlds.

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6 See also this talk by Sir Ken Robinson, “Bring on the learning revolution!” – https://bit.ly/3xOqZBj
1.4.2 Exploring the Enabling Role of Education

“The evolutionary challenge for education in the third millennium is one of designing the vehicles for thrivable human co-evolutionary development in partnership with earth. It involves the conscious creation of learning systems of syntony through such soft technologies as evolutionary systems design. To facilitate this change, we need to develop the competencies as curators of our own evolutionary potential – in community. To empower the cultivation of learning that is world shaping – not in an effort to learn how to direct the wind, but in recognition and celebration of the fact that we must learn how to adjust the sails.”

~ Alexander Laszlo

Learning how to adjust the sails and becoming the curators of “our own evolutionary potential – in community,” as working group member Alexander Laszlo said, is the spirit of an education that enables the development of our evolutionary development. Through this Blueprint we set sail for becoming a thrivable civilisation with regenerative, inclusive, and distributive economies, and through a governance of stewardship. As with any process of becoming, this also requires that we, and the collectives we form part of, can transform, heal, and renew (see chapters 2 and 3).

Education that enables the required transformative learning of self, community, and society also requires narratives that can engage this process (see chapter 7). Words such as interdependence, right relationship, stewardship, collective responsibility, planetary boundaries, ecosystemic health, wisdom, unity in diversity, and inclusiveness are starting to emerge in education curricula. Especially in educational programs that nurture a spiritual appreciation of nature, and include practices for imagination, art, play, and creativity.

Education that enables also requires learning processes that can shift behavior. This requires first of all a deeper understanding of the trajectories we are currently on, and how our perspectives and experiences of that journey may differ.

1.4.3 The Why and Who of Educational Transformation

“We are called to grow in responsibility and wisdom rather than seeking to grow in power and influence over others.”

~ Anneloes Smitsman

The transformative capacities of education have been severely constrained by the same cultures and growth archetypes that are at the root of our sustainability crises. ‘Success and progress’ in the current setting of our mainstream economic paradigm are still largely defined in terms of wealth or income (i.e., GDP) and not in terms of well-being. As a result we have driven our world to the edge of collapse by pursuing unsustainable growth archetypes that drive patterns of profit maximization for companies, and wealth maximization for individuals.7

The journey towards regeneration and thrivability requires a radical redefinition of success, and the development of whole new growth archetypes that are embedded within the planetary and social threshold boundaries that serve our thrivability.8 A redesign of curricula and educational systems of schools and universities is only the beginning step for empowering lasting transformative change.9 In particular where this relates to persistent harmful economic and political pursuits of unlimited growth that endanger the carrying capacities of our planet and future wellbeing (IPCC, 2021; Steffen et al., 2018).

7 For alternative to GDP for measuring progress see – https://bit.ly/2Trmxf2
8 A safe operating space for humanity; A Safe and Just Space for Humanity: Can we live within the doughnut?
9 See also https://www.sciencedirect.com/science/article/pii/S0921800919301685
The harmful and unsustainable economic growth archetypes are based on exponential growth through extractive production and unlimited consumption, which have also become the growth archetypes for many educational organizations and programs. Living systems grow and develop through intricate feedback loops that regulate and adjust essential systemic functions and boundaries. These boundaries and feedback loops are largely missing in our economic, educational, and governance systems.

The ‘why’ of educational transformation is not only about our sustainability or climate crisis, there is a deeper and even mythic dimension at play as well. In Myths, heros and heroines are often confronted with major challenges for which new capacities have to be developed (Houston, 2009). There is usually a scene of danger in the form of a beast or a life-challenging situation to challenge the transformation of the learner through which new and sometimes dormant capacities and perspectives emerge and develop. We have now manifested multiple scenarios of danger and challenges, the COVID-19 pandemic, our climate crisis, biodiversity loss, radicalization and polarization of our political and social lives, breakdown of old institutions and norms, and so forth. Yet, could it be that underlying all this it is time for humanity to also evolve the mythic archetypes and patterns for how we have been learning, growing, developing and evolving? What will be the new mythic patterns, codes, and archetypes of future civilizations who are regenerative by design and have learned how to thrive with our planet? What can become possible when we shift our predominant focus on individual heros and heroines to the ‘heroism’ of the collective? Shifting from ‘me’ to ‘we’ and ‘us’ and becoming more diversely inclusive of the myriad of identities, backgrounds, cultures, and narratives, is essential for becoming thrivable civilisations.

Furthermore, the mythic patterns of humanity’s dominant cultures have mostly centred around fighting ‘the beast’ (or enemy) rather than transforming it by facing our inner demons and resolving our inner projections. This dualistic mythic pattern continues to dominate the mainstream narratives in the media, politics, and in the stories children learn and watch. The so-called beast of our ‘sustainability crisis’ is not outside of us. Declaring a war on climate change or the coronavirus crisis, as if often narrated in the media, is not going to help us find and develop the new capacities for this time. What is called for now is one of the deepest learning processes we have ever had to embark on, namely our maturation as a species.

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11 https://storygrid.com/heroines-journey/
12 See also https://charleseisenstein.org/essays/the-coronation/
1.5 CORONA LESSONS AND IMPACTS ON EDUCATION

The coronavirus pandemic has impacted each of our lives and continues to do so. It has also impacted on educational opportunities for so many learners around the world. While some students were fortunate to have access to distance learning, many did not, which has taken the digital divide to whole new levels. Especially for learners with disabilities and developmental challenges, the impact of this coronavirus crisis is felt most severely. The coronavirus crisis is far from over and also reveals deeper learning issues that go to the root of our sustainability crisis, such as:

1. **Collective commitment** – The issues at hand require collective commitments towards our shared responsibilities for resolving the multiple challenges we are faced with, and with awareness and responsibility for how this impacts the most vulnerable.

2. **Cooperative innovation** – Finding lasting cures for all people is the only solution, not merely for a subset of a few. Long-term cooperation and a collaborative focus is required; especially within the business and investment community. Economizing life by prioritizing short-term economic gains over systemic health and wellbeing is symptomatic of the root causes of our sustainability crises.

3. **Transformation embraces uncertainty** – A crisis always brings uncertainty, the question is how we can work with this uncertainty to let go of old habits, embracing the unknown and make space for the emergence of new possibilities through trial and error and experimentation. Seeking to secure or eliminate perceived threats limits our transformative capacities and blocks learning.

4. **Future preparedness begins now** – The Coronavirus pandemic reveals how unprepared we are to resolve the much greater crises of runaway climate change and irreversible biodiversity loss. Until we develop the required capacities for becoming ‘future-creative’ (Smitsman and Smitsman, 2020), the default learning pattern will be one of learning by crisis rather than learning how to avoid creating crises. Ralph Thurm’s book *The Corona Chronicles – Envisioning a New Normal for Regeneration and Thriving* (Thurm, 2021) is a valuable resource for developing such required capacities. The cartoon below is from this book, which went viral soon after it was first launched on social media. It shows how a set of crises await us if we don’t learn how to tackle them.

Figure 1. Source: *A set of crises that await us if we don’t tackle them, Ralph Thurm (2021)*

13 See https://aheadahead.earth/
1.6 THE THERAPEUTIC ROLE OF EDUCATION

There is one further dimension of educational transformation that we would like to bring attention to, before embarking on the 7 Learning Perspectives. Namely, the therapeutic role of education and in particular how to transform and prevent addictive and harmful patterns of behaviour. As mentioned earlier, it is evident now that the free-market economic models are incapable of course-directing humanity to live within the critical planetary and social boundaries and thresholds (Raworth, 2017; Rockström et al., 2009). Harmful market mechanisms feed on people’s predispositions for addictive behaviours.

When people are caught into recurring patterns of addiction, they are not going to change their behaviour simply because they are told to do so, even if they know that their behaviour is harmful. In fact, such warnings may produce a hardening in denial and defensiveness. The same appears to apply to humanity’s economic addictions, and our harmful belief that the grass is always greener on the other side of the planet (or soon, galaxy).

The first sign of addiction is the person’s denial of the problem, which shows up as defensiveness, lying, excuses and blame. People trapped in denial of their addiction have a tendency to direct their learning capacity in getting smarter to avoid taking the required actions to heal. Mainstream education is part of a larger problem that creates addictive entrapments that hinder learning. For education to serve in an enabling and transformative capacity, it needs to also assume a therapeutic and developmental role when required. This role also includes learning how to develop self-regulating and adaptive capacities that can prevent entrapment in patterns of harm and addictive behaviours. Accordingly, education needs to make us more resilient and creative about how to live in a world with growing complexities, pressures, and challenges.

This also raises the question concerning who requires education and re-education first and foremost? Is it necessary to focus on those in power who create the systemic entrapments first or will a bottom-up approach be more successful? Or, both? Awareness of identifying and developing capacities for transforming addictive traps and patterns is an essential component of the journey of learning for regeneration and thriving.

To summarize, mainstream education and its institutions are part of a larger developmental problem of our species. A problem that is systemic and requires a thorough revisioning of how education can best serve our human development, while simultaneously transforming the systemic barriers that hinder our transition towards regeneration and thriving. This also calls for a major revisioning of existing roles and responsibilities of educators. Particularly in academic institutions that over focus on narrow specializations and academic excellence at the cost of a multidisciplinary and interdisciplinary approach to holistic human development. When educators become learning facilitators this will also dissolve the one-directional ‘teacher-student’ dualities that continue to dominate in many teaching professions.
2. LEARNING AS CONTEXT

The Sea Voyage Journal – Learning as Context

“We need to acknowledge the forces that hold the current system of education in place. We also need a compelling vision of what change we want to create. The alternative we propose has to be more compelling, and this also requires a theory of change – like the one we explored through the five stages of transformational change. How we move from where we are to where we want to be.” Raz looked concerned, he was well aware that this wasn’t an easy ride.

“Hmm, but do we even know where we want to be and what that’s going to look like? We’ve onboarded this sailing trip to the land of thrivability without having developed the competencies to get there, and without knowing whether we will eventually recognize the harbour of this new land, … if we get there. Do we know what we are looking for?” Eric was feeling tired and voiced what many of us were feeling. Deep inside his heart he knew that he did the right thing by joining this trip, yet there were days like today that the going got hard and he had to source deeply from within to find the strength to keep going. The conditions on the boat were challenging for all of us.

“Our selves – and each other,” said Alexander with a smile.

“What if uncertainty is a good thing?” Howard too can feel the challenges of having left the known territories, yet he was also cautious to settle for the kinds of false certainties that drove our world towards collapse.

He continued, “Remember that caterpillar metaphor. I may have no clue what it means to become a butterfly, even if I am told, while being a caterpillar. How do we describe where we want to go when we don’t know exactly where we want to go? Language carries a legacy that can become detrimental.”

“I agree with Howard, if educational transformation becomes another certainty it can’t be transformation.” Frederic added.

“Let’s put it in context. What does uncertainty mean for you when your context is our sustainability crisis, the Anthropocene. What feelings, thoughts, visions, and sensations does this context evoke?” Anneloes asked the crew.

“A lot of uncertainty, and also fear, a fear that could possibly inhibit.” Luis answered, while the rest of the crew took some time to reflect on this. Several minutes passed with many anxious faces and an unspoken tension in the air.

Suddenly Michele jumped up and said with excitement, “How about we use the Noosphere as context. When we lock our perspective into the Anthropocene we’re still just focussing on the geosphere and the biosphere. Yet, what if there is a mind sphere, a noosphere as Teilhard de Chardin and Vladimir Vernadsky suggested? A planetary mind of consciousness that builds on the geosphere and biosphere and opens whole new potentials for us?”

“I like the noosphere as a point of destination, yet the Anthropocene is our current context now, this is our point of departure.” Maria replied.
“So let’s add one more perspective, which may integrate both the Anthropocene and the Noosphere as a third way, and that is the perspective of us living in a new renaissance period, a regenerative renaissance.”

“Can you say more about that?” Bas asked.

“Yes, when we access the latent and future capacities that are activating and awakening from deep within our collective unconscious, and because of our sustainability crisis, we become the noosphere,” Anneloes said and continued, “In that moment we become the renaissance impulse for self and society to be reborn from the higher orders of reality that many have spoken of as ‘the required shifts in consciousness’. During renaissance times deep mythic and psychic archetypal structures are stirring up, providing tremendous opportunities for transformational change.”

“This is exciting,” Henk added, “I have this feeling and deep sense that we are on the brink of something new here. Because it’s not only about the concepts and the different words we are discussing here, but we’re actually moving into the next stage.”

Henk’s enthusiasm and awareness of our own change process was compelling, even more compelling than anything we could have constructed about the vision of where we were going. At the same time a lonely seagull landed on the railing, and decided to join our trip for a couple of hours, while far away from the mainland. We marveled how this bird has an amazing sense of directionality, without needing to be told where she (or he) should go. Reminding us that our inner compass is part of the architecture and evolution of life.

This chapter explores the first transformative perspective, namely “Learning as Context”. We live in a time of many paradoxes. There is growing concern of impeding ecosystemic collapse and compounding planetary tipping points, including the possible extinction of the human race (in addition to many other species). Yet meanwhile Wellbeing and Happiness Indicators are telling us that humanity has never done better. So what’s really going on? The difference in perspectives boils down to context. Depending on the context we choose, we change what we measure and focus on, and thus the story changes. People remember stories, not data or facts. Hence, context is incredibly important for learning.

Through this chapter we focus predominantly on a critique of how western modernization has impacted education and learning. We do so with deep respect for the many diverse and non-western pathways of development, and in particular indigenous ones that are beyond the scope of this Blueprint to explore in-depth. Our western centric exploration is thus not by exclusion of other cultures or perspectives, but rather to emphasize the harmful impacts that these dominant worldviews have had on our global community and planet, and in particular the purpose and praxis of mainstream education today.

The three-fold structure for exploring “Learning as Context” unfolds through three interrelated context principles:

- **The Anthropocene as Context** – Carrying capacities and threshold boundaries offer contexts for sustainability, regeneration, and thrivability;
- **The Noosphere as Context** – Global consciousness and unity offer contexts for the new cosmologies and our evolutionary development.
- **A New Renaissance as Context** – Rebirth and the emergence of new futures offer contexts for our transformations and future becoming.
These 3 context principles can also be combined with the methodology of the “Three Horizons Framework” of Bill Sharpe. Namely as three horizons for how we perceive the changes that our world and humanity are moving through, and the estimated futures of these various perspectives.¹⁴

2.1 THE ANTHROPOCENE AS CONTEXT

“The Anthropocene as a context principle can reveal the leverage points between transformative education opportunities and economic transformation necessities, within the larger context of transitioning towards regenerative and redistributive economies of thrivable civilizations.”

~ Anneloes Smitsman

A growing body of research confirms that humanity has effectively changed the planet’s geological era, which has shifted us out of the Holocene that began about 11,700 year ago. This new era that is humanly caused is called the Anthropocene.¹⁵ In the year 2000, Nobel laureate Paul Crutzen intervened during a scientific meeting of scientists discussing the Holocene. He stated that the Holocene era can no longer be described for our current era and suggested we need a new term to describe our current geological era, which he coined the Anthropocene (Davidson, 2000). *Anthropos* is a Greek word for *human*.

¹⁴ https://www.triarchypress.net/three-horizons.html

¹⁵ See also the body of research on the “Capitalocene,” by Jason Moore who proposes that the Anthropocene should be renamed the “Capitalocene,” by acknowledging how the rise of capitalism after 1450 signifies a turning point in the history of humanity’s relation with our natural world and resources (Moore, 2016).
Michael Quinn Patton also refers to the Anthropocene as a Context Principle, namely to “know and face the realities of the Anthropocene and act accordingly” (Patton, 2019). In the Blue Marble Evaluation this is worked out as follows: “Human actions have created the global problems humanity faces; human actions are necessary to resolve these problems; thus, there are things for evaluators to know about global sustainability in the context of the Anthropocene to undertake evaluations knowledgeably and credibly” (Blue Marble Evaluation, 2021).

r3.0 has long advocated for inclusion of thresholds and allocations as context in assessment of sustainability and sustainable development. The same applies to assessments of regeneration and thrivability, which are meaningless without thresholds and allocations as context. r3.0 asserts a causal chain for defining whether development is sustainable, regenerative, and ultimately thrivable. Living species rely on vital capital resources for their wellbeing; other living beings, as individuals and collectives, exert impacts on those vital capital resources; these impacts can place the sufficiency of the stocks and flows of these vital capital resources at risk; individual and collectives therefore have duties and obligations to manage their impacts on these vital capital resources to respect the carrying capacities of the stocks and flows of these vital capital resources, in order to maintain the sustainability of these resources, which in turn support the capacity for regeneration and thriveability. In other words, regeneration and thriveability can only persist in systems that are sustainable.

Thresholds and allocations are also part of the story of the Anthropocene, which reveals how, by exceeding major planetary threshold boundaries, we have ushered in a new geological era. If we apply the Anthropocene as a context principle for assessing the role of education, it can be argued that education has failed to prepare and mature humanity to live and grow within the carrying capacities of our planet (Schlaile, et al., 2017).16

The Anthropocene also highlights the urgency for transforming our educational systems as part of the required transformations of our economic and political systems, which continue to drive the goals for what, why, and how people are learning. A century ago, it would have been unthinkable for many teachers to have to explain to students how humanity may cause a new geological era, i.e. the Anthropocene. And yet this is precisely what has happened. The unthinkable became reality, which raises further questions:

- What possibilities are we missing today?
- What is it that seems unthinkable today that fifty years from now may prove to be far more significant than we realized?
- If we had accepted all those decades ago that we were causing our planet to shift geologically, would we have acted differently?
- How can education free people’s minds and shift their behaviour when narrow economic and political agendas continue to dominate?

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16 Working group member Michael Schalle cautioned how sustainability as a concept is a complex notion that means various things to different people and to think in terms of “directionality, legitimacy, and responsibility” combined in order to respond to the questions: “transform or sustain what, why, and by/for whom.”
2.1.1 The Anthropocene as a Geological or Economic Marker

Despite growing evidence that the Anthropocene is functionally and stratigraphically distinct from the Holocene, the debate continues as to where and how to mark the beginning of the Anthropocene, based on measurements in geological data (Steffen et al., 2015; Waters et al., 2016). The scientific consensus (for now) is to use the start of the atomic age of the 1950s as the official marker for the beginning of the Anthropocene, based on a set of 24 global indicators that reveal how human economic activity is the prime driver of change in the Earth Systems post 1950s (Steffen et al., 2015). This same time period from the second half of the 20th Century also marks the beginning of what has been called the Great Acceleration (Meyer, 2019).

Simon Lewis and Mark Pelican suggested shifting the date for the beginning of the Anthropocene much earlier, namely around 1610. They suggest that this time period marks a turning point in global ecology due to colonization, which led to significant intermixing of ecosystems and extensive changes of species, as can be observed in the geological layers of the Earth (Lucht, 2018). Irrespective of where the exact starting time of the Anthropocene is placed, the questions we liked to raise are:

- What does learning in the Anthropocene mean?
- What new learning contexts does the Anthropocene as context provide?

2.1.2 The Anthropocene as a socio-economic change process

We are going to be in the Anthropocene for a long time to come. If we see the Anthropocene as the culmination of a long and steady socio-economic process, the case can be made that the Anthropocene is the result of a much longer change process that began as early as 12,000 years ago. Namely at the beginning of the agricultural revolution, and in particular the beginning of the age of Empire building that started around 6,000 years ago (Smitsman et al., 2018). During these periods people became more skilful in adapting the natural world to their needs and desires. We could even say that this was the start of our technological innovation and economic development, by developing the tools and technologies for significantly altering our relationship with the earth. Below are some brief considerations of the implications of this shift in our technological skills and economic orientation, and in particular for countries who followed western models of modernization:

- **Nature became reduced to a mechanical process and economic commodities** – Since the 1500s the western worldview has become increasingly mechanistic and utilitarian. The science of Newton and Descartes portraying nature as a soulless mechanical process, replaced the earlier philosophical orientations and indigenous cosmologies of the universe as a living entity. With the spirit taken out of nature and consciousness taken out of the universe, western science and technology became increasingly focused on the mechanics of the biophysical and chemical processes to serve human development. The earlier indigenous notions of stewardship and interbeing were replaced by doctrines of competition for scarce resources and world domination.
- **The doctrine of competition and dominance became the new normal** – Those who followed the western models of modernization linked political influence directly with economic growth, irrespective of the impacts. Evolution became a political agenda, namely the rights and privileges of the fittest. Education served to implement this (then modern) worldview of a mechanistic universe, by teaching evolution as a competitive process for securing domination and survival in environments of scarce resources, spearheaded by those who are best fit to survive in hostile conditions.
- **Resource abundance developed into resource scarcity (from a planetary perspective)** – By not allowing ecosystems to regenerate, biodiversity got increasingly harmed and our economies became fossil fuel dependent rather than regenerative and renewable.
2.1.3 Harmful Growth and Developmental Disorders

The Anthropocene as context raises serious questions about our learning capacities for regeneration and thrivability. In fact, as a species we might actually have serious developmental disorders. Here are some of the key reasons for this bold statement:

- **Our societies grow unsustainably** – Our species continues to exceed and harm critical carrying capacities of our planet by growing exponentially without breaks. We push development at the expense of vital sustainability thresholds (environmental ceilings and social foundations\(^{17}\)) and ecosystemic boundaries.

- **Our development tends to inhibit healthy self-regulation, adaptation, and autonomy** – By driving exponential quantitative growth at the cost of qualitative development, humanity has created artificial growth archetypes that are completely out of sync with our natural world. This generates addictive behaviours, divisions, polarization, and systemic entrapments.

- **Our measures for success and progress are deceptive** – As a species we broadcast deceptive self-images with poor self-reflection, and little responsibility for the harm we cause.

- **We lack future wise leadership** – We fail to take adequate actions for addressing and stopping our worsening sustainability crisis, despite knowing better and being well informed of all the implications.

It appears that education itself is part of the core issues of our human crisis. Educational philosopher Zachary Stein even went as far as suggesting that education is the meta crisis, i.e. the crises behind the crises (Stein, 2019). Many educational systems are the offspring of mechanistic worldviews that sacrifice life and interdependence in the name of ‘progress.’ Harming the conditions for life to thrive. These mechanistic worldviews are the drivers of the Anthropocene, and can be identified by:

- The belief that our universe is a mechanistic system composed of separate parts and particles that can each be manipulated, dissected, and engineered to best serve humanity’s growing needs.

- Political doctrines of world and cultural domination, through policies of rapid extractive economic expansion, empire building, and systems of winners and losers.

Mechanistic worldviews developed centuries ago during times when human caused planetary collapse and mass extinction events seemed unthinkable. The world looked green and lush, with abundant resources for all. A world ready to be conquered and divided in competing parts with artificial boundaries to form the nation-states for the industrial age. Ruled by people who believed it was their right and privilege to set the course for our common future.

Education served a specific purpose, namely to prepare people to serve the machinery of the nation-state and modernize our lives through material and scientific progress. The past was seen as an echo of restrictions that had to be overcome in order to progress, whereas the future represented the dreams of richness and influence for a growing group of people. Most people would not have realized how this trajectory would later run us over the cliff. Nor was there a general sensitivity about the unspeakable harm this trajectory was causing to the countries that were turned into colonies. Indigenous nations in particular were the ones who suffered the impacts most severely.

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\(^{17}\) The term “environmental ceilings and social foundations” was coined by Kate Raworth. (Raworth, 2012)
2.1.4 Education for Thresholds and Allocations

The paired notions of thresholds and allocations reside at the core of r3.0 thinking, reflected in all the Blueprints leading up to this one. Thresholds, which apply to economic, social, and environmental systems, delineate the boundary between the sustainability and the unsustainable; the phase shift across tipping points from one state of being into a transformed state of being; the carrying capacities beyond which ecological systems tip into overshoot and social systems tip into undershoot or shortfall (McElroy 2008). Allocations proportionally distribute accountability for respecting thresholds commensurate with impacts on vital capital resources. In particular, impacts that place at risk the maintenance of sustainable levels of resources necessary for wellbeing (McElroy 2008). Respecting thresholds and allocations is key to achieving baseline sustainability as a stepping stone to regeneration and thrivability.

Education for thresholds and allocations goes much further than education that prepares people to develop the capacities to employ their rights of right livelihood. This beckons the question – what does education for right livelihood on a finite planet with limited resources and damaged ecological and social ecosystems mean?

In Eastern traditions, and in particular the Buddhist philosophy “right livelihood” (samyag aajiiva) was founded on five pillars: 1. Do not kill, 2. Do not steal, 3. Do not misuse sex, 4. Do not lie, and 5. Do not abuse intoxicants. Similar values can be found in other cultures concerning economic norms. How do people who are learning in highly competitive systems learn to secure and enact their right of “right livelihood”?

These values of right livelihood are offered here to demonstrate how value based education cannot be separated from economic behaviors. Learning, being, and acting form a whole ecology. Education is an ecology of learning. Economic systems are also learning systems and form part of educational environments, whether conscious of this or not. For the purpose of this Blueprint we seek to inquire how the interdependence between education and economy can be one that serves the transformation of both, and the transformation of our societies at large.

Education for sustainability, regeneration, and thrivability requires contextualization within thresholds. This contextualization is precisely what is lacking in mainstream economic models and narratives, and it is also largely missing in the operationalization and curricula of many of the mainstream educational systems. Education without this contextualization becomes education for greenwashing and incrementalism. The absence of thresholds and allocations is a dangerous trajectory and this is where education is required to take a proactive and advocative role to change this. For example, the entire food chain for sustainability is deeply unsustainable precisely because contextualization within thresholds is largely absent.

Whole new market mechanisms and narratives are required to explain to people the realities of the new ‘supply and demand’ in an age of physical resource scarcity and creative abundance. Thresholds describe what is still available within carrying capacities, allocations describe the ‘allowed demand’ by defining fair shares. The longer we ignore these relevant and necessary contexts, the more irrevocable damage will be created. If education wrongly makes people believe that our sustainability crisis can be resolved with the current sustainability targets and measurements, education is part and parcel of the compounding sustainability problems. Without inclusion of and narratives for thresholds and allocations, transformation indicators and targets fail to transform the harmful economic drivers (Baue and Thurm, 2021).
2.1.5 Going beyond sustainability

The Anthropocene is the ultimate consequence of our dualistic models of progress through unsustainable growth models and archetypes. When the Anthropocene becomes a context principle for learning we need to be careful not to overfocus on problems and issues. This is also where sustainability (with or without context) can become restrictive as a sole narrative and may actually hinder the necessary engagement for our personal and societal transformations (Smitsman, 2019). The following questions may support a deeper exploration for the Anthropocene as a learning context in curricula:

1. What are some of the main drivers that led to the Anthropocene, and how do those drivers exist today in your life and community?
2. What could we have done differently to avoid the Anthropocene? What did we fail to learn despite feedback and warnings?
3. How can the contexts of thresholds and allocations become embedded in learning for regeneration and thrivability?
4. How can the Anthropocene, rather than it being the hallmark of a destructive species, become the hallmark of a responsible and maturing species?

2.2 THE NOOSPHERE AS CONTEXT

“This idea of interconnected consciousness is not new, although the means to observe it scientifically have only now become available. In the middle of the last century, Teilhard de Chardin wrote in his beautiful books, The Phenomenon of Man and The Future of Man, that he could only understand our existence and our nature as purposeful. He argued, poetically and passionately, but with scientific understanding, that we would become an integrated intelligence for the earth – like an atmosphere, but made of thought and feeling. He called this the Noosphere, a layer of knowing that would sheath the Earth. It makes sense, and even seems possible: we only need to decide to accept it as our future.”

~ Roger Nelson (2019, chapter 1)

The Noosphere is a philosophical concept that has been developed by several authors, including biogeochemist Vladimir Vernadsky, and philosopher and Jesuit priest Pierre Teilhard de Chardin. Vernadsky used the concept of the noosphere as the next evolutionary step from geosphere to biosphere to noosphere, in which case “noo” refers to “mind or reason” from the Greek "νοος".

Teilhard de Chardin used the concept of the Noosphere as a context for understanding the direction of our evolutionary development – from geosphere to biosphere to noosphere – but with a different vision and understanding of this “mindsphere” and the role of humanity. His perception of what humanity is learning to become relates to his vision of a kind of “Omega Point” as the birth point of a “global mind” that would finally become conscious of itself. He believed that we were evolving towards this “Omega” point further into the future. In his words, “The second stage is the super-evolution of man, individually and collectively, by use of the refined forms of energy scientifically harnessed and applied in the bosom of the Noosphere, thanks to the coordinated efforts of all men working reflectively and unanimously upon themselves.” (Teilhard de Chardin, 1959).

18 For an eco-feminist critique of the Anthropocene as a framework, please see the following article by working group member Jennifer Browdy, who offers the term “Androgynocene” to invite a balanced relationship between the feminine and masculine qualities for developing Gaia leadership: https://www.kosmosjournal.org/reader-essay/moving-from-the-anthropocene-to-the-androgynocene-gaian-leadership-for-a-balanced-world/
2.2.1 The Global Consciousness Project by Roger Nelson

Scientist Roger Nelson, after meeting with Teilhad de Chardin many years ago, built on this idea of the noosphere and developed an elaborate research project over 17 years at Princeton University. This project became the Global Consciousness Project (GCP) and served to investigate whether there is indeed such a thing as a Global Mind or Global Consciousness.

Nelson’s research provides fascinating evidence of a very high likelihood of this Global Consciousness that relates directly to humanity’s feelings and thoughts, and builds on the earlier suggestions of Carl Jung’s “collective unconscious”. Based on laboratory and field experience, Roger Nelson and his team built an experiment to gather evidence of mind-matter interactions on a global scale. They created a monitoring system that could register consciousness effects using random number generators in a network with nodes around the globe. In the words of Nelson:

“The results in the experiment show that what we’re calling global consciousness is linked to small, but ultimately significant correlations among the RNGs in the network. This is an anomaly, because these devices are designed to be truly random, and moreover are separated by great distances. But they do become correlated. The odds against chance for the GCP’s composite result are more than a trillion to one. In addition, an ongoing program of deeper analysis and modeling reveals several more measures of structure in the data, including two orthogonal correlation measures (analogous to mean and variance), and variations in secondary parameters including distance and time. The data also show that effects are larger when people are awake, which is an unpredicted but eminently reasonable result.”

~ Roger Nelson (2019)

Their research results indicate conclusively the presence of global consciousness, or a “Noosphere”, by showing how the random number generators become correlated during large events in which humanity has a shared experience. This correlation happens again and again during such events, which cannot be explained by other factors as these devices are designed to be truly random and are separated by great physical distance. The odds against chance for these results are more than a trillion to one (Nelson, 2019, Chapter 22).

2.2.2 A radical new understanding of human learning and development

This fascinating perspective of the Noosphere coupled with the evidence from the Global Consciousness Project (GCP) indicates how our human thoughts and feelings are part of, impacting, and impacted by a larger field of consciousness that fractals out within us as we fractal out within it. The whole notion that our mind is isolated to and originating solely from the human brain, and as if operating separate from our environment, cannot hold in view of this research and the consistent evidence of GCP. This also raises the question, as offered by working group member Jennifer Browdy: “How do we process and transform the deep trauma that is embedded in our collective Noosphere after centuries of learning and living with violence and oppression?”

The main point we seek to make here is that learning for regeneration and thrivability requires learning perspectives such as the Noosphere and Global Consciousness. Especially for developing a radical new understanding of our human capacities and purpose. What Teilhard de Chardin, Roger Nelson, Ervin Laszlo, Jude Currivan, and other consciousness scientists further indicate is the importance for humanity to become conscious of itself as this noosphere or global consciousness.
The hypothesis is that when Global Consciousness becomes aware of itself within the human experience, we will reach a tipping point or Omega point that shifts our consciousness to higher or more integral orders of reality of greater coherence. This Omega point also promises to serve as a critical factor for developing the required collaboration and stewardship capacities for regeneration and thriving. The Noosphere perspective provides context and depth for achieving what Working Group member Bas van den Berg describes here below:

**Bas van den Berg:** “The importance of facilitating transformation as a qualitative change in consciousness towards a regenerative state – i.e. one that gives back more to the planet than it takes. To relearn how we relate to and connect with space, ourselves and others. To expand the conventional learning-to-know and learning-to-act with learning-to-be (what does it mean to live here), learning-to-care (about oneself, others, the place and future generations) and learning-to-anticipate (learning towards and from possible futures).”

### 2.3 A NEW RENAISSANCE AS CONTEXT

The word “renaissance” comes from the Latin “renasci”, which means to be born again. From a Western historical perspective, the previous Renaissance period took place from the 14th to the 17th century. It was celebrated as a time of major change and innovation for Europe – a cultural, artistic, scientific, political, and economic rebirth that followed the many hardships of the Middle Ages. A time of ingenious discoveries across the whole spectrum of creative invention. This same Renaissance period also brought untold hardships for indigenous nations around the world while colonization and slavery spread, and nation-states developed their military regimes.

Acknowledging the shadow side of this earlier renaissance, we propose here to refer to our current period of major change and transformation as a “new renaissance” or a “regenerative renaissance”. Renaissance periods promise a wellspring of emergence, rebirth, new growth and new ways of being, and this also requires whole new forms and ways of learning, which require fundamental new perspectives of the nature of reality and the universe we form part of. The 7 Learning Perspectives of this Blueprint support us to explore this regenerative renaissance impulse, and become receptive towards the new futures that are seeking to emerge from the deeper shifts in our collective consciousness.

A fascinating third way perspective opens up when combining all three contexts: the Anthropocene as a context for understanding sustainability, regeneration, and thrivability; the Noosphere as a context for understanding the direction of our evolutionary development; and the Renaissance as a context for understanding our transformations as a process of rebirth and future becoming. In other words, the Anthropocene acts as the necessity for transformational change, the Noosphere connects us to collective consciousness as the catalyst for transformation, and the New Renaissance connects us to our future potential as the attractor for transformation. In chapter 4 “Learning as Future”, we will explore further how to become aware of our future possibilities, and how to enter various states of future consciousness.

Renaissance as a context principle can help us to become aware of the emerging new futures in the midst of breakdown and collapse, which is a vital awareness for this time. When all people see is collapse and breakdown, with more and more news of emergencies, losses, and death, people can easily feel overwhelmed about life and spiral down into depression. Renaissance as context can give hope in times of loss and despair by trusting in the resilience and creativity of life within us, to utilize the falling away of the old as the opportunity for the emergence of the new.
People around the world are actively building for a new and regenerative world and future, there is much activity under the surface that has not yet reached the mainstream media. Renaissance as context is a key perspective for transformative learning and helps us to develop our resilience and high creativity in times of chaos, death, and breakdown. Most importantly it helps us develop trust that life goes on, even though we may not yet know how... Renaissance conversations place emphasis on: emergence, renewal, rebirth, new possibilities, innovation, and future directionality. Such conversations are much needed for this time and also empower the ways of working with complexity and collapse without invoking tremendous fear for change and loss.

Renaissance education empowers learners to prepare for the future by becoming the needed transformation, and by giving birth to the future potentials of a thrivable world. Learning for regeneration and thrivability prepares us to meet present challenges from a higher order of reality that is not in breakdown. It connects with the potentials of the Noosphere and utilizes the context of the Anthropocene as the necessity for transformational change. Combined, this can lead to profoundly new ways of being and doing. Our future, both as a species and as an evolving and awakening planet, literally depends on how we embrace this call of a new and regenerative renaissance.

2.3.1 Imaginal Learning

Humanity as well as our planet is going through a deep rebirth, mutation, and transformation, and not just death and collapse. In many ways this is only the beginning as the 6th IPCC assessment report clearly indicates. Learning for regeneration and thrivability also requires understanding of imaginal states of consciousness and how the imaginal is not just imaginative. Anneloes Smitsman and Jean Houston explains this as follows in “The Quest of Rose”, the first book of their “Future Humans Trilogy”:

“The imaginal is a future creative state of consciousness that extends beyond the “imaginative” and connects us with the transformative powers of the Universe in the way we think, perceive, and respond.”

~ Anneloes Smitsman and Jean Houston (2021, p.231)

Renaissance periods are imaginal periods of enhanced creativity and innovation, due to activated imaginal as well as imaginative states of consciousness. Imaginal learning can be facilitated through activities such as: visioning, art, music, intuitive movement, dreaming, storytelling, meditation, acting, as long as it helps people enter into a state of possibility from where they can more freely access their future potential beyond what is currently happening in their lives. Imaginal capacities include the capacities to dream, sense, envision, intuit, imagine, and inquire. Above all, imaginal capacities emerge from letting go of trying to force the path ahead, and allowing our minds to shift out of the habitual and conditioned modes of thinking.

Children are naturally born with imaginal capacities. Yet, unfortunately many children are taught that the imaginal belongs to the realm of fantasy, fiction, idealism, or virtual realities, and is not of direct practical use for developing their intellectual capacities. Our brightest thinkers, inventors, and philosophers used imaginal processes for developing their capacities and breakthrough ideas. For those working in educational transformation, we highly recommend including collective imaginal learning processes and practices as a key strategy for systemic transformation. We cannot build new systems from old states of consciousness.

If you are a facilitator of transformative learning or learning for regeneration and thrivability, we also highly recommend including imaginal processes to help people access new learning capacities. The imaginal states of consciousness are naturally more fluid and have higher states of coherencies compared to analytical states of consciousness. Accordingly, it is possible to access levels of complexity with greater amounts of information that would in an ordinary state overwhelm the person. In an imaginal state we
can experience complexity as the simultaneous co-arising nature of reality, which is essentially a nonlocal state of consciousness that is not in time (more about this in chapters 3 and 4).

Even by spending a few minutes a day in an imaginal state of consciousness you can significantly enhance your learning capacities and creative agency. Furthermore, imaginal states of consciousness, by being coherently open and flowing, can help reduce stress and transform rigid thinking patterns and behaviours. The creative nature of life is imaginal, and this is precisely what becomes activated during times of systemic breakdown and collapse. Education can capture the current imaginal influx of our Renaissance time and direct this towards the development of new forms of learning, being, and acting.

The imaginal also acts as an immune system response for attracting a system into a higher state of potentiality that is not under threat or collapse. Just like the caterpillar houses its butterfly potential in its imaginal discs that become activated when its old form is no longer sustainable, our imaginal potentials of future states of consciousness activate when old forms of growth are no longer sustainable. Yet, activation alone is not enough to transform to new ways of being. Unless we actively engage these enhanced imaginal opportunities, we will revert back to default positions and outdated modes that keep us on the trajectories of collapse (instead of rebirth).

From a renaissance or rebirth perspective, we could say that the imaginal is also what helps us transition from old to new states of consciousness. As mentioned in the beginning message of our Sailing Voyage, the message in the bottle reads: "One cannot enter the land of thrivability from the old states of consciousness that created the problems you seek to resolve".

Imaginal learning can also help people become aware of the transition moments in themselves and in the systems they form part of. There is a growing trend in education for schools and universities to include forms of mindfulness training for enhancing people’s self-awareness. For example, W.G. member Ajay Rastogi from India, shared about their program in India where mindfulness in nature programs are provided to school teachers to help them build their resilience and practice in supporting young students of ages 5-11. We recommend that mindfulness training is linked with or integrates imaginal practices that can help develop a greater fluidity and flexibility of mind and consciousness.

2.4 SUMMARY

Learning as Context

Through Learning as Context we explored three perspectives:

1. The Anthropocene.
2. The Noosphere.
3. A New Renaissance.

Learning as Context through these three perspectives raises awareness about the root causes, necessity, evolutionary direction, and opportunities of our personal and collective transformation for regeneration and thrivability. By applying the Learning as Context perspectives in education, learning becomes more transformative and relevant while also inspiring hope that we can co-create a regenerative and thrivable world together.

- The Learning as Context perspectives serve as essential conditions and attractors for transformative learning, and inspire our personal and societal development towards regeneration and thrivability.
3. LEARNING AS LIFE

The Sea Voyage Journal – Learning as Life

“It’s vital that we transmit evolutionary learning by showing trust in life,” said Dave while his fellow mavericks looked at the dark clouds that were approaching our ship.

Shweta sighed, “Yes, and let us also expand this by considering how our human capacity to learn and develop is systemic and integral to our universe, as we explored in the 3 Evolutionary Principles of Life. Learning and development is not just preserved to us humans. I really wish for educational transformation to explore more deeply what we truly understand by life, the universe, the nature of reality, and the process of evolution.”

The wind started to pick up, Anneloes showed the other mavericks how we can anticipate the direction and force of the wind by looking ahead. “You see these larger ripples on the waves about 10 miles to the North? The changes in the wave patterns help us to see into the future and anticipate. Ralph, can you check on the map if we can adjust course by about 12 degrees North East, that will enable me to change our direction to avoid sailing head-on into the storm. Bill, just in case the wind gets unpredictable, can you let me know what the depth of water is further East on the map, a few miles out? Just in case we need to sail in the mainsail and ride out the storm on our front sail.

“That wind is really picking up guys, time to get into action but remember to breathe and flow as a team. Remember, Syntony, Syntony, Syntony. We can do this, we've done it before!” Alexander pitched in while making sure the crew kept calm and focussed through the syntony exercise he guided us through the day before, during calm weather!

Meanwhile Ralph and Bill got busy tracking a new course, while the others were preparing the sails for the rapidly nearing storm. Just like Anneloes anticipated, the storm did shift their wind direction significantly. While waiting for the new course from Ralph and Bill, she released the sails slightly to reduce the tilt of the boat and support the crew who went on the front deck to roll in the mainsail.

Michele was enjoying herself, she likes a good adventure. She knew now was not the time to philosophise about her thoughts with the rest of the crew. Everyone was focussed on the tasks at hand. Yet, she couldn't help the flow of reflections that this experience evoked in her: One day I’ll tell my students this story. Everything’s coming together now with nature showing us how to get through the storm, if we read the signs, and we’re all learning together without being told what to learn. This is the space of fluidity that I want to keep reenacting when I get back home to facilitate collaborative learning. Here there are no experts, we are all learners. Ha, this would make for a perfect rite of passage moment. Participatory, interactive, listening and learning from the unexpected.

“Michele, are you with us?” Dave noticed her dreamy look, and wondered where her mind had drifted. “Zip up Michele, here on this line. It will still let you move on deck but prevents you from losing the boat in case you fall off. It’s going to get rocky now.”

Ralph and Bill found a safer trajectory to ride out the storm as Anneloes turned the wheel just in time to adjust the ship to their new course. For the next twenty minutes nobody spoke, we sat as one mind with total focus while the ship and the waves became as one body with the wind blowing us full force ahead. There was a silent understanding among us, a profound moment that will remain with us forever.
Anneloes noticed how one of the mavericks was getting seasick. "Keep your eyes on the horizon," she said, "it helps with seasickness."

"Let's sing. Who knows a good song?" Vlado proposed.

And so the Maverick sailed along through the storm, singing and learning together as life, and for some with their stomachs turned upside down.

Through this chapter we will explore the transformative perspectives of "Learning as Life" through three evolutionary principles of life and five stages of transformational change, as well as an exploration of Evolutionary Learning Ecosystems. The three-fold structure of this chapter includes:

- Three Evolutionary Principles of Life.
- Five Stages of Transformational Change.
- Five Syntony Spheres of Evolutionary Learning Ecosystems.
3.1 THREE EVOLUTIONARY PRINCIPLES OF LIFE

“To tell the full story of a single particle we must tell the story of the universe, for each particle is in some way intimately present to every other particle in the universe….Education might well be defined as knowing the story of the universe, of the planet Earth, of life systems, and of consciousness, all as a single story, and recognizing the human role in the story. The primary purpose of education should be to enable individual humans to fulfill their proper role in this larger pattern of meaning.”

~ Brian Swimme and Thomas Berry (1992, p. 29, p.256)19

Have you ever considered what it means to learn as life? If you are an educator, have you ever asked your students what it means for them to learn as life? Through this section we will explore some of the key principles and qualities of life as an evolutionary process, in order to gain a deeper understanding of what “Learning as Life” can reveal. We start this exploration with various scientific perspectives, which does contain some complex terms and concepts. After this we will explore how you can share these insights with children and support them (and yourself) to discover essential qualities of life, which form the foundation for learning for regeneration and thrivability.

Now the complex concepts first! Earlier we mentioned the importance of consciousness, and in particular how our states of consciousness influence how and what we learn. There is a growing body of research that is called “New Paradigm Research” (Laszlo, 2016), which offers credible evidence for the primacy of consciousness (Penrose, et al. 2017). If indeed consciousness (and not materialism) is primary it then follows that consciousness and self-conscious experiences can no longer be attributed only to human life. It then also follows that consciousness cannot be explained as a mere derivative of complex evolving systems.

The perspective offered through this Blueprint is that consciousness is who and what we all are. Furthermore, it appears that consciousness in its most fundamental non-physical state is essentially informational, and more precisely digitized information, which in-forms how life grows, develops, and evolves. By starting from the assumption that consciousness is who we all are, and not something that we ‘have’, we start from a position of unity. This also implies that learning and development is unity based. In other words, children are born from the unity of life, irrespective of whether their parents experience life as unified, or not. In many indigenous communities this fundamental and prior unity is nurtured from the onset of life, and even from pre-conception (Jacobs, 2016; Lawlor, 1991). We will explore this unity principle in greater depth at the end of this section. First, we offer two contrasting perspectives of what is meant by evolution:

● The mechanistic scientific perspective – This perspective of evolution developed through Newtonian sciences and Darwinian doctrines and suggests that evolution is a process of life that unfolds like a competitive zero-sum game with win-lose dynamics and progresses through random selections of best fits.20 The mechanistic scientific perspective views the universe as composed of separate parts and particles that are mechanically held together by immutable laws of nature.

● The new paradigm scientific perspective – This perspective of evolution is developing through quantum field theory and evolutionary systems design and suggests that evolution is a collaborative process of life with multi-level selections (Atkins et al., 2019), which may include elements of competition yet is overall a process of synergistic collaboration. The new paradigm scientific perspective views the universe as unified and holonic (wholeness based), whereby deeper implicate orders of reality fractally in-form all scales and levels of existence.

19 The essence of this beautiful story can be read here – https://bit.ly/3jROEyQ

20 We acknowledge how Darwin himself may not have agreed with the way his theory was used or interpreted to justify an economic and political agenda of competition and survival of the fittest.
The new paradigm sciences is a growing body of research, which includes fields such as cosmology, quantum mechanics, quantum field theory, complexity sciences and complex adaptive systems research. What this research reveals is that the universe exists and evolves as a unified entity through implicate orders of reality that literally in-form the emergence and evolution of life. This is best understood through the holographic principle in physics, which suggests that the appearance of our physical universe as a three-dimensional space (with the flows of time as the fourth dimension), originates from a two-dimensional holographic surface or boundary that is mathematically encoded at the smallest level of physical reality (Currivan, 2017). This mathematical encoding consists of digitized information that acts as a numerical alphabet that fractally in-forms how life comes into being and evolves.

Furthermore, what this new paradigm research suggests is that what we call ‘physical reality’ is essentially information, and more precisely holographic information. New theories from informational sciences and quantum physics also suggest that both space-time and energy-matter can be interpreted as complementary expressions of this digitized holographic information that forms part of the implicate orders of reality (Bohm, 1980; Levy, 2018; Smitsman and Currivan, 2021; Smitsman and Houston, 2021).

In simpler words, it appears that our universe is not composed of separate parts and particles that are held together through mechanical processes and random events, as was the classic scientific worldview. Introducing children from an early age that they are growing up in a universe who is intelligent, whole, and unified, will nurture a very different quality of humanness compared to growing up in a hostile and mechanical universe.

By understanding the nature of physical reality as information it also provides whole new ways of thinking about materiality, design, governance, and system architecture. People commonly think of information as data that are non-personal and abstract. The fundamental information of the universe is digitized (numerical) information, which generates fractal patterns that can be observed in the ways trees grow, cyclones form, weather patterns develop, our bodies grow and evolve, and also in the ways our body-mind complex learns and develops. What this reveals is that there are deeper implicate architectures of information that are whole and unified, and which in-form how (our) life manifests, unfolds, and evolves. This architecture of information also exists in the classroom and in the playgrounds where children learn, and yet are students ever made aware of this? It is also present in our dreams, ideas, and thoughts, and in the ways we communicate with each other. And it is present when communication breaks down, when conflicts arise, when we feel things are not working out, or we feel disconnected and apart.

As cosmologist Jude Currivan suggests in her research, the architecture of the universe is as a cosmic hologram, which is informational (Currivan, 2017). This new understanding of information has major implications for how we as humans can redesign the architecture of our human made systems, and in particular those systems that direct our educational, economic, political, and social development. In other words, the universe has a precise design or architecture that enables it and us to learn, develop, evolve, and become self conscious for very precise reasons.

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21 See for more about this research; Bohm, 1980; Capra and Luisi, 2014; Laszlo, A. 2001, 2009; Laszlo, E, 2016; Penrose, 2017; and Smitsman, 2019.
We have summarized here below this new paradigm perspective of evolution and evolutionary development in the form of three evolutionary principles (Smitsman, 2021):22

1. The universe exists and evolves as a single unified entity, an undividable wholeness. Cosmologically this means that both energy-matter and space-time are complementary informational expressions of that underlying wholeness.23
   ○ This evolutionary principle helps us understand how life evolves as a unified reality at all scales and levels of existence.

2. The universe evolves coherently through increasing embodied complexity, as space expands and through the flows of time, precisely tuned to make life possible
   ○ This evolutionary principle helps us understand how complexity and diversity become generative, to co-create coherent systems that remain rooted in the underlying unity and wholeness of our universe.

3. The universe learns and develops its evolutionary capacities by actualizing its cosmological potentials through systemic autonomy and autopoiesis – i.e. self-creation, self-regulation, and adaptation.
   ○ This evolutionary principle helps us understand the systemic conditions for learning and development as well as how we grow, expand and evolve as a self-actualizing process of consciousness.

While exploring these evolutionary principles during one of our working group sessions it sparked many deep conversations about universal consciousness, the fundamentals of learning, and the purpose of education. This was summarized in the following way:

The process of education and the process of life are fundamentally about the alignments between the inner potentials of universal consciousness and the actions that we take.

When there is little or no alignment between our consciousness potentials and the actions we take, this manifests as dissonance. We, therefore, suggest that education must help people reflect on this dissonance and create capacities for aligning our actions and behaviours with our inner potentials of consciousness and the implicate orders of reality. We further recommend exploring these evolutionary principles as a framework for guiding and evaluating how we develop our human capacities and society as a whole.

3.1.1 Exploring the qualities of Life as an Evolutionary Process

We understand that facilitating these three evolutionary principles will require some unpacking and simplification, for children in particular. For example, you can playfully introduce children to these principles by letting them draw and explore the following graphic and story from “The Quest of Rose” by Anneloes Smitsman and Jean Houston:

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22 The 3 evolutionary principles have been designed by Anneloes Smitsman, which have also been applied in the SEEDS Constitution for which she served as one of the architects.

23 This is based on a reinterpretation of the laws of thermodynamics as laws of informational dynamics, see Currivan, 2017; and Smitsman and Currivan, 2019, 2021.
“Rose begins by placing the little black dot, just like there is a black hole in the center of our galaxy, to represent how life is unified and whole. Emerging from the black dot she draws a spiral to represent how life evolves through change; spiraling outward and inward by expanding and contracting. Around the spiral, she draws a circle to represent how life actualizes consciousness through autonomy, balance, and boundaries. The dot, spiral, and circle form a trinity that represent the three laws or evolutionary principles of life.”

— Anneloes Smitsman & Jean Houston (2021, chapter 4)

Learning for regeneration and thrivability begins by showing children how we each are an expression of life and how we as humans form part of a large family and web of life that includes countless other species and nature herself. Remind children how they are nature too, how we each are and belong to life. Show them how to connect with our planet as a living being with enormous wisdom, caring, strength, creativity, and resilience. Guide children (and yourself and other adults) to discover and experience the fundamental qualities of life.

Explain how these qualities form part of us and are unconditional. In other words, we don’t lose these qualities if we make a mistake, feel upset, or cause pain. Life is all about learning, each new day brings another opportunity to learn how to care and love more fully. Also explain to children how we can always return to and call upon these fundamental qualities by bringing our awareness to life within and all around us.

We offer these guidelines below for starting this exploration of the qualities of life, which will also make the evolutionary principles more meaningful and tangible:

1. **Life is Consciousness** – Life is the dynamic expression of consciousness, which is the source of our being and who we all are.

2. **Life is Unity** – Life is unified at all levels and scales of existence, we are the diverse expressions of the unified consciousness of life.

3. **Life is Community** – Life forms communities of being and interbeing, including all the non-human ecologies of life and the animals, plants, insects, trees, rivers, oceans, planets, suns, stars, galaxies, and all other expressions of our universe.

4. **Life is Wholeness** – Life is whole and undividable and so are you. You cannot be separated from life or consciousness no matter what you experience or do. When parts of your body are sick, disabled, dying or missing, and when you feel loss, division, or separation, know that you remain whole and undividable.

5. **Life is Relationship** – Life is always in relationship with us and itself as a whole. Life communicates, senses, informs, responds, and listens. Life is an ongoing and evolving relationship. Partnering life is the essence of learning and acting for regeneration and thrivability.

6. **Life is Change** – Life is a continually unfolding journey of change, letting go, and becoming through which we and our universe regenerate, renew, evolve, and actualize the potentials of consciousness that we are. There are no end goals or final destinations on the journey of life.

7. **Life is Choice** – Life gives us the power and possibility of choice. Life is not a deterministic or computational program, life enables choices through which old ways die and new futures are made and born. We can choose to co-create a world in which all of us can thrive together.

8. **Life is Creativity** – Life is a future creative and possibility increasing process that creates the conditions for us to thrive and evolve. Your creativity is the power of life within you, through which you can learn, grow, and evolve by exploring, creating, transforming, dissolving, renewing, rebirthing, and generating life.
9. **Life is Learning** – Life is a continual journey of learning, discovery, and development. All expressions of life learn, from the tiniest cells and microbes, to the largest galaxies, we are always learning and evolving. Your capacity to learn is intrinsic to life.

10. **Life is Healing** – Life heals the deepest wounds, those of the flesh as well as those of the heart and mind. Your capacity to heal is intrinsic to life. We heal with the structures and potentials of wholeness and unity. In healing we learn how to trust, let go, surrender, open, renew, and evolve ourselves.

11. **Life is Love** – Life has an enormous caring capacity and is always sourced in unity while manifesting wholeness in diversity. In other words, life is a great force of love, a force of deepest cosmic coherence. You too can learn how to become a force of love.

12. **Life is Wisdom** – Life generates wisdom by converging knowledge into knowing and information into experience, which combined matures as wisdom. You too have this capacity to become a force of wisdom, by learning the ways of life. Call upon the wisdom of life for guiding your life and the choices you make.

13. **Life is YOU** – Continue your exploration, enjoy!

Transformative education requires knowing how to work with and align with the transformative dynamics of life itself. When we grow and develop our human societies in ways that are not coherent with the way life evolves, our impacts will cause harm. Learning for regeneration and thrivability is all about exploring the growth patterns and evolutionary wisdom of life, and not just academically, but also musically, artistically and physically through movement, dance, and sports. Draw and dance the spiral, play the notes of dotted harmonics, score the ball in a circle. Put the qualities of life into action, relate from these qualities and facilitate learning and development as an evolutionary process of life.

*Lifecentred learning* is the foundation for holistic human development. We form part of a living universe that (who) is intelligent, whole, and conscious, even if we don’t yet fully understand all the ways how this works. Let us act accordingly as well! Facilitate education that bridges science, spirituality, artistry, culture, technology, and indigenous wisdom.

### 3.1.2 Applying the Evolutionary Principles as Design Principles

Table 1 provides guidance for applying the three evolutionary principles as evolutionary design principles, in the context of educational transformation AND economic transformation. As mentioned in the previous section, the three evolutionary principles reveal how nature does not merely learn by default or randomly, but rather as a result of implicate orders or structures of reality that are finely tuned to make life possible. Intelligence in people is not different from the intelligence of nature, or the intelligence of our earth. Furthermore, it is suggested through the new paradigm sciences that these deeper structures of reality are structures of and in consciousness. Hence, the case for the primacy of consciousness and matter as a form of consciousness.
Table 1 below serves as a guideline for explorative learning conversations, to spark initial questions, ideas, and perspectives for redesigning and transforming our educational and economic systems together.

Table 1. *Design Inquiry with the Evolutionary Principles of Life*

<table>
<thead>
<tr>
<th>Evolutionary Principles</th>
<th>Economic Design</th>
<th>Educational Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universes exist and evolve as single unified entities.</td>
<td>How would you design an economic system based on this principle of wholeness?</td>
<td>How would you design education if you knew that this condition is given?</td>
</tr>
<tr>
<td></td>
<td>What kinds of value would such an economic system be based on?</td>
<td>How can we support people to experience this principle as a learning process that transforms?</td>
</tr>
<tr>
<td>Universes evolve coherently through deepening embodied complexity.</td>
<td>How would you design for economic activities that honour the evolutionary coherence of life?</td>
<td>Does your teaching of evolution emphasize this perspective of our universe?</td>
</tr>
<tr>
<td></td>
<td>How can your design ensure that complexity remains embodied in living processes that include planetary and social threshold boundaries?</td>
<td>How can learning help us to recognize and work with complexity from this perspective of evolutionary coherence?</td>
</tr>
<tr>
<td>Universes learn and develop by actualizing their cosmological potentials through systemic autonomy and autopoiesis (self-regulation, adaptation, and self-creation).</td>
<td>What would an economic system based on autopoiesis look like?</td>
<td>How can learning facilitate a discovery and understanding of both the generative and destructive aspects of systemic complexity?</td>
</tr>
<tr>
<td></td>
<td>What does systemic autonomy mean in economic systems?</td>
<td>How can learning support an appreciation of unity as diversity and the importance of collaboration and co-creation for evolutionary coherent complexity?</td>
</tr>
<tr>
<td></td>
<td>How can we design for learning economies that actualize the cosmological potentials of life?</td>
<td>How can we support students to discover experientially the principles of autopoiesis – i.e. self-regulation, adaptation, and self-creation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How can learning and development through education help us actualize our cosmological potentials as individual people and as a collective species?</td>
</tr>
</tbody>
</table>
3.1.3 Integration and Self Evaluation

For many people the way they have learned about evolution (at school) didn’t spark a deep excitement to explore these concepts further or apply this to our own lives. If this was your experience as well, we hope that the way we have been exploring the evolutionary process through this chapter is providing a more meaningful and personal context. The following questions below can support you to integrate and more fully apply what you have learned and read so far. You can also explore these questions with others, and make them part of learning conversations for regeneration and thrivability:

1. Has your understanding of evolution changed as a result of what you have read in this Blueprint so far? If yes, how has it changed? If not, why not?
2. How can evolution as a unifying and consciousness actualizing process help you and your communities to become more regenerative?
3. How are you applying the principles of evolution to your evolutionary learning and development?
4. How are you applying the qualities of life to your evolutionary learning and development?

Many of these new paradigm scientific understandings of life, reality, and consciousness mirror earlier indigenous worldviews and values. Both consider life and our universe as sentient and part of a deeper unity that includes us all, with emphasis on holism, regeneration, consciousness, and co-evolution.

In other words, the universe of the new paradigm is one of interbeing, where working with and honouring planetary boundaries and critical thresholds serves to innovate our systems and cultures towards less harm, and greater thrivability for life as a whole (Laszlo, 2015; Smitsman, 2019). New paradigm education supports us to become ecologically aware and mature. The following was also expressed by W.G. member Luis Alberto Camargo, who mentioned the following regenerative education principle:

**Luis Alberto Camargo: “Regenerative Education develops our capacity for identifying interdependence from a living systems approach. Developing the capacity for interbeing, for being nature. This includes the capacities to: perceive, recognize and interpret the invisible (energy flows, relations in living systems human-human, human-nature, nature-nature). From this can emerge a coherence whereby these capacities align to thought, word, and action (being) in service to life.”**


3.2 FIVE STAGES OF TRANSFORMATIONAL CHANGE

As mentioned earlier, evolution is a coherent (and not a random) change process, based on how the unity and wholeness of consciousness brings itself spontaneously into being. Transformational change is a particular dynamic of evolutionary change that serves to shift forms and states in order to enable the continuous evolution of life and consciousness.

The type of transformational change process that we will explore in this section relates to how we actualize qualities and possibilities from a state of potentiality to full actualization. And in particular, how we bring our future potentials into being. We will explore this through five stages of learning and becoming, based on the research of Anneloes Smitsman (see Smitsman 2019; and Smitsman and Houston, 2021). Conceptualizing transformational change through these five stages of becoming can also serve as an integral framework for working with evolutionary change, as well as for evaluating our evolutionary capacities and potentials.

These five stages are inspired by the metamorphosis of the caterpillar into the butterfly. The caterpillar transformation provides an excellent metaphor for our societal transformation, especially during this phase of increasing crises and systemic collapse (Sahtouris, 2000). The caterpillar metaphor also provides essential understanding for how to navigate the various states and stages of developmental change, as well as providing a narrative for holding the complexity of all that is happening in our world right now.

As with all metaphors we need to be careful not to use all of it literally, and rather work with it to stimulate new ways of thinking and being. As was pointed out by W.G. member Stefan Bergheim, the potential of a caterpillar is limited to becoming a butterfly. Humans will never become a literal butterfly, and we have more future possibilities than merely one future trajectory. Furthermore, humans have expanded imaginal capacities for both engaging as well as directing (or choosing) from a myriad of future potentials for our evolutionary development. Accordingly, the metaphor serves as an imaginal process for exploring the dynamics of transformational change, which we can then learn to apply to multiple future potentials that we wish to bring into life, and in ways that are regenerative.

Learning for regeneration and thrivability also includes learning how to bring our future into being, whilst in the midst of systemic collapse and the dying of old states and systems. The butterfly genetic codes exist within the skin of the caterpillar since its birth, in the form of or imaginal discs. The genetic codes of the caterpillars are not the same as those of the butterfly. As one being, this little creature has two unique bodies that each belong to a different stage of its life with unique capacities. The caterpillar stage of life is one of a crawly creature, close to the ground, and always focussed on consuming until it reaches a threshold. The butterfly stage of life is one of a winged creature, made to fertilize and cross-pollinate our world with its gentle touch and expansive view. It is time that we too learn to live lightly on this earth and recognize how our stage of always seeking to consume more has come to an end.

The imaginal discs of the butterfly are like stem cells, which later become the imaginal cells that form the organs and body of the butterfly. The imaginal discs are kept in a state of dormancy by the juvenile hormone of the caterpillar. When the caterpillar grows older and increases in weight, the juvenile hormone decreases and a molting hormone called ‘ecdysone’ is released. The ecdysone is what activates the imaginal discs. Once the juvenile hormone drops below a critical threshold, the next wave of ecdysone hormone catalyzes the change of the caterpillar skin to transform into a chrysalis. When the chrysalis has formed, the caterpillar’s body releases specific enzymes that turn its body into a nutrient soup, which the imaginal cells then use to start forming and growing the butterfly body.
The cocoon of the caterpillar serves as a womb (for the development of the new butterfly), as well as a hospice (for the dying body of the caterpillar). This perspective emphasises how we need to develop both capacities for working with the unique and often challenging transition dynamics of our current tipping point time. During transitions between major eras, paradigms, and worldviews, also called a Renaissance period, there is much collapse, death, and breakdown.

Many of the new futures people are envisioning (and aspiring to) will have to be born within these cycles of death, decay, collapse, and breakdown. The ways that birth and death are now taking place simultaneously and across our world, is unprecedented. The pattern of metamorphosis offers a powerful narrative and understanding for working with the transformation dynamics of this transition period. This process is further explained in Table 2 and Figure 2, here below, based on the research of the five archetypal stages of actualization by Anneloes Smitsman (Smitsman, 2019; Smitsman and Houston, 2021).

Table 2. The Five Stages of Transformational Change and Applications

<table>
<thead>
<tr>
<th>Stages</th>
<th>Butterfly Formation</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Potential</td>
<td>The butterfly is a future potential, contained within the caterpillar body in the form of imaginal discs that carry its distinct genetic codes. The activation of the imaginal discs occurs when the juvenile caterpillar hormone decreases below a critical threshold, and the necessity for changes reaches a critical point.</td>
<td>The future potential of a living system already exists in an imaginal state of potential. The activation of the imaginal potentials can happen spontaneously when the necessity for transformation reaches a critical threshold. ● Condition by design – make it possible for people to connect with the future potentials of their inner and outer system(s) by allowing for new transformative choices.</td>
</tr>
<tr>
<td>Future Possibility</td>
<td>The imaginal discs are grouping into imaginal cells, the future potential now becomes a future possibility. This often coincides with the first phase of cocoon development, during which time enzymes start to break down the old caterpillar body to turn it into a nutrient soup for the formation of the butterfly body.</td>
<td>The formation of the imaginal cells of the butterfly can be compared with the experiential state where future potentials become future possibilities. ● Condition by design – make it possible for people to experience the future potentials of their system(s) as future possibilities in the form of new visions, new goals, and new aspirations linked with the new choices.</td>
</tr>
<tr>
<td>Stages</td>
<td>Butterfly Formation</td>
<td>Applications</td>
</tr>
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</tbody>
</table>
| Future Capacities | The formation of the butterfly organs and internal systems within the protective space of the cocoon, while the caterpillar body has now transformed into a nutrient soup. | The formation of the butterfly organs and internal systems can be compared with the development of future capacities for realizing and birthing the future potentials within the local context.  
  Condition by design – support the development of required future capacities and a cocooning environment for the release and dissolution of old systems that no longer serve. |
| Future Embodiment | The completion of the butterfly body within the cocoon, followed by its birth and emergence. Future states are being embodied as the newly formed system and capacities that include the nutrients of the old. | The completion and birth of the butterfly body can be compared with the capacity to fully embody the future potentials in a realized local state. potentials within the local context.  
  Condition by design – support the embodiment of the future potentials by integrating the new capacities in the activities and processes of the local systems. Celebrate the birth of future emergence. |
| New Reality     | The life of the butterfly outside the cocoon, which carries within it the fertility and cycles for the future potentials of new caterpillars. | The life of the butterfly body outside the cocoon can be compared to the actualization of the future potentials in the form of new realities.  
  Condition by design – support people to experience and share the new embodied realities of the future potentials that are now realized. |
As a narrative, we can make the comparison of how the always hungry overeating caterpillar mirrors our always hungry overconsuming economic systems. Both lead to collapse of the old systems when the physical carrying capacity is exceeded. Only the caterpillar is a wiser creature by spinning its cocoon when it is ready to surrender to its transformation. In contrast, our human world has been cocooned since the on-set of the coronavirus pandemic and yet we fight this restrictive phase, at the expense of our planetary threshold boundaries and carrying capacities.

3.2.1 Evaluating transformative capacities

The caterpillar pattern of transformation reveals many lessons for how to create the appropriate conditions for actualizing our future potentials within systems and cultures that are no longer sustainable (or desirable). The same pattern can also be applied as a diagnostic framework for identifying and addressing systemic thrivability barriers of unsustainable growth and development, which we will further explore in the next sections (see also the research of Smitsman, 2019).

Furthermore, these 5 stages of transformational change can also be linked with a growing body of research on social tipping points, and particularly the irreversibility of tipping points. Metamorphic transformation could be seen as an irreversible tipping point i.e. once the caterpillar body starts to dissolve inside the cocoon to become a butterfly, it can no longer return to its earlier state (which is true for many developmental processes). The following questions are worth exploring for transformative learning and development:
1. Can educational transformation become a generative tipping point for creating an irreversible change process in people’s values, behaviours, and actions towards regeneration and thrivability?

2. How can education prevent people from reverting back to earlier states, stances, and behaviours that are no longer sustainable or not regenerative?

3. Can education become a tipping point for the required economic and political transformations towards regeneration and thrivability?

Manjana Milkoreit et al., suggest that, “tipping points in general can be defined as the point or threshold at which small quantitative changes in the system trigger a non-linear change process that is driven by system-internal feedback mechanisms and inevitably leads to a qualitatively different state of the system, which is often irreversible” (Milkoreit et al., 2018, p.9). The metamorphic transformation of a caterpillar fits all four criteria for tipping points in general. However, we are not a caterpillar, nor do we attempt to literally mimic this pattern.

The research on social tipping points suggests that one of the key differences between ecosystemic tipping points and social tipping points relates to the underlying mechanisms of feedback-driven non-linear change (Milkoreit et al., 2018, p.10). It is often assumed that social tipping points form as thresholds of critical mass, in such a case the non-linear feedback dynamics are attributed to a committed minority reaching a critical group size. Centola (2018) attributes 25% to the critical mass for effecting tipping point change. Once this tipping point is reached, it is said that the actions of this minority group can trigger behavior change in acceptance of a minority view (Centola, 2018). This theory is also applied to explain the adoption curve of new technologies, i.e. once a critical mass is reached the uptake by the masses accelerates significantly.

However, the butterfly pattern as explored above reveals a different pattern and dynamics for non-linear feedback that drives tipping point change. In metamorphic transformation it is not the critical mass of the present state, or critical group size, that generates the new feedback-loops that drive change, but rather the degree of coherence of new future states in relation to collapsing or decreasing coherencies of the old states of a system. Once future potentials become embedded in present states and are able to link-up and coordinate the activities and potentials of the existing system, a tipping point is reached that transitions the system into a new state and developmental direction. This is similar to what happens when the imaginal butterfly discs link-up to form the imaginal cells and organs of the new future states.

Although beyond the scope of this Blueprint, we highly recommend research that combines enhancement of transformative capacities via future embedding (the metamorphic pattern) with deliberate critical mass strategies, in this particular case targeted at the critical mass for imaginal discs to link-up and coordinate to become the imaginal cells and organs of the new future states. To better understand these various transformation dynamics and tipping point potentials, we propose to first get a clearer understanding of the systemic barriers that inhibit transformation.

3.2.2 Becoming Conscious of Systemic Transformation Barriers

Through this section we apply the five stages of transformation to explore the presence of inner and outer systemic transformation barriers through a series of questions. The questions are applied to our inner process of transformational change, and further contextualized to outer systemic barriers in education.
<table>
<thead>
<tr>
<th>Stages</th>
<th>Systemic Inner Barriers</th>
<th>Systemic Outer Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Potential</td>
<td>● Do you feel disconnected from your future potential?</td>
<td>● Does this education stimulate students to explore their future potential and those of others?</td>
</tr>
<tr>
<td></td>
<td>● Do you feel like your choices have no influence over the direction of your life?</td>
<td>● Does this education support new choices for engaging our future potential?</td>
</tr>
<tr>
<td></td>
<td>● Do you feel trapped in your present reality?</td>
<td>● Does this educational system invite its own transformation as part of the transformative learning it offers?</td>
</tr>
<tr>
<td></td>
<td>● Do you want everything to remain as it is now, and fear change?</td>
<td></td>
</tr>
<tr>
<td>Future Possibility</td>
<td>● Do you experience a sense of future possibility?</td>
<td>● Does this education inspire and support our future possibilities?</td>
</tr>
<tr>
<td></td>
<td>● Are you in touch with your imaginal capacities, and do you know how to apply those for transforming your life?</td>
<td>● Does this education stimulate people to develop their imaginal capacities in the way learning is facilitated?</td>
</tr>
<tr>
<td></td>
<td>● Does your life enable new possibilities and new directions, or is it repetitional and over-structured?</td>
<td>● Does this education include free spaces for dreaming into and exploring the unknown and the new frontiers of learning?</td>
</tr>
<tr>
<td></td>
<td>● Do you have any free places inside yourself and in your life, for the unknown and unexpected to enter your life?</td>
<td>● Does this education evaluate learning progress in creative and imaginative ways?</td>
</tr>
<tr>
<td>Future Capacities</td>
<td>● Do you feel motivated to develop your future capacities?</td>
<td>● Does this education motivate people to develop their future capacities?</td>
</tr>
<tr>
<td></td>
<td>● Do you trust in your abilities for developing new and future capacities that help you to thrive?</td>
<td>● Does this education evoke a sense of trust and hope in the future?</td>
</tr>
<tr>
<td></td>
<td>● Are you able to apply or share your future capacities for our world?</td>
<td>● Does this education engage people to apply and share their future capacities in real-life contexts?</td>
</tr>
<tr>
<td></td>
<td>● Do you have time or space to invest in your future becoming and develop the capacities that help you to actualize your vision for yourself?</td>
<td>● Does this education provide time and space for people to grow into their future becoming and support the transition from the old to the new ways?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Does this education invest in our future becoming?</td>
</tr>
<tr>
<td>Stages</td>
<td>Systemic Inner Barriers</td>
<td>Systemic Outer Barriers</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
| Future Embodiment      | - Do you experience a sense of future embodiment, a deeper knowing that the future already exists within you?  
- Are you able to integrate your new experiences and perspectives?  
- Do you feel a sense of inner coherence between your ideas, aspirations, beliefs, feelings, thoughts, behaviours, and actions?  
- Do the experiences of your life reflect who you are?  | - Does this education support people to embody their future capacities?  
- Does this education through its culture and systems embody the qualities of the future consciousness we aspire?  
- Does this education help people to integrate the actualization of their future potentials within their whole self-development?  
- Does this education inspire coherence with what it teaches and evoke trust in transformative change?  |
| New Reality            | - Are you aware of the ways in which new realities are emerging in your life as a result of your inner transformation and development?  
- Are you able to experience the new realities of your actualizing future potential in your life and the world around you?  
- Do you feel an increased sense of thrivability and greater resourcefulness as a result of your own transformation and development?  
- Has the story of your life and the story you communicate to others about your life, changed or evolved as a result of your inner transformation and development?  | - Does this education support and raise awareness of the emergence of new realities that are indicative of our future development?  
- Does this education celebrate and acknowledge people for their developing future capacities and the ways in which they are part of the co-creation of the new systems and cultures of learning?  
- Does this education communicate the new stories of the future of learning?  
- Does this education help people to join the global and regional movements for future education and transformative learning?  
- Does this education continue to sustain and support the new realities it promotes for people after their education through this pathway has completed?  |
3.2.3 Transformation Strategies for Addressing Systemic Transformation Barriers

To complete section 3.2, we offer the following brief systemic transformation strategies, adapted from the Ph.D. research of the lead author Anneloes Smitsman, to further address the systemic barriers in education that can result from mechanistic systems or models.24

![7 Systemic Transformation Strategies](image)

Figure 3. Source: Systemic Transformation Strategies by Anneloes Smitsman (2019).

1. **Design for collaboration and coherence** – Create learning tasks and evaluation processes that require people to collaborate and exchange in ways they would otherwise not have; i.e. at the level of the students, teachers, and departments, as well as between educational organizations and initiatives. Support educational narratives that strengthen a sense of mutuality and empathy, and include practices of group dialogue, shared visioning, and experiential learning for exploring the 3 evolutionary principles.

2. **Create new shared goals from interdependencies** – Create meta-level shared goals at the institutional level of education with involvement of the learners, to bring people together in developing a unifying vision and commitment for the purpose of (their) education. For example through school pledges and campaigns that can align with global education goals for life centered learning and sustainability education. Furthermore, initiate peer-to-peer support groups and collaborative projects that are designed to amplify and support a greater coherence of the learning ecosystems.

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24 See also the following Kumu map on which this research is based – https://www.kumu.io/anneloes3/transformational-change-for-thrivability#systemic-thrivability-barriers-close-up-analyses
3. **Create attractors for reciprocity** – Create meaningful opportunities through collaborative projects, campaigns, events, storytelling, media creation, and entrepreneurial activities that encourage reciprocity and value exchanges. This can also include design for incentivizing reciprocity through tokenization and regenerative currencies.\(^{25}\) New value experiences can also serve as attractors for the emergence of reciprocal behaviours, which can also generate more trust in transformational change. Furthermore, we recommend initiating conversations for rethinking what gets rewarded during and post education.

4. **Create new ways to measure value and progress** – Apply indicators and feedback loops for evaluating learning and development at the level of the student, teacher and the system of education that captures and encourages value-creation and regenerative progress. Counteract standardized tests and hierarchical performance indicators with new ways that capture how people learn collaboratively and how the overall learning capacities of the learning ecosystems brings value to all the members of this ecosystem.

5. **Provide education that develops capacities for thrivability** – The development of thrivability competencies and capacities is explored in more details in chapter 5. Education for thrivability places consciousness at the centre of learning, rather than a focus on content primarily. In particular this applies to how education can foster the kinds of personal and collective consciousness states that are regenerative, and foster a deeper connection with life and the worlds we form part of. This can include methods such as; visioning, dialogue, meditation, music, arts, drama, storytelling and multimedia story creation, role-playing, systems sensing, nature-based projects and nature immersed learning experiences.

6. **Develop practices that cultivate a culture of empathy and love** – Role-play exercises and dialogues can greatly enhance people's empathy and their sense of mutuality to counteract competitive and polarizing dynamics. Providing playful challenges, games, and incentives for developing shared goals and responsibilities to address common problems can also support a culture of empathy and love. Other examples are, campaigns (such as zero-waste, measuring the ecological footprint together, cultural diversity), future citizens parliament of life centred civilizations, sports, arts, and music festivals. Developing networks of care and instilling values of love and care is essential in narratives and communication Furthermore, gratitude practices such as asking people to share what they appreciate about each other can greatly contribute towards a culture of care. By creating cultures of empathy and love, people become more open and trusting and the system becomes more open to learn from and respond to pain (rather than being blocked or numb), which further helps to enhance a sense of trust and connection, and increases awareness.

7. **Engage and sustain thrivability patterns** – By introducing the above strategies mechanistic systems start to transform from inside, and new thrivability patterns will start to emerge. To further build on these emerging new patterns, help people to become aware of this through meaningful feedback, rewards, and storytelling as well follow-up training to further strengthen the new consciousness states. Ensure also that emerging new patterns get rooted into the ways goals and agreements are formed and applied, and invited to evolve. Once regeneration and thrivability become systemic patterns and become part of the culture, it becomes a living experience for all those who form part of these systems.

\(^{25}\) For an example about incentivizing reciprocity through new regenerative currencies and tokenization see SEEDS.
3.3 FIVE SYNTONY SPHERES OF EVOLUTIONARY LEARNING ECOSYSTEMS

“When Evolutionary Learning Communities (ELCs) interested and engaged in educational innovation join together they form an Evolutionary Learning Ecosystem (ELE). By engaging with as broad a cross-section of ideal educational orientations, these learning ecosystems actively engage in emerging new educational realities. In doing so, they are emerging the basis for not only the new societies of the twenty-first century, but more importantly, the new forms of human being (and human becoming) for this age.”

~ Alexander Laszlo, 2020a

Learning for regeneration and thrivability requires that the institutions and systems that provide such education do themselves mimic the collaborative learning capacities and patterns of natural ecosystems. People learn as much (if not more) from the dynamics of the environments in which learning takes place, as from the learning content or tasks. Educational transformation starts here, by understanding how schools and other learning organizations can become learning ecosystems (see also Spencer-Keyse et al., 2020). When the emphasis is on becoming a learning ecosystem, and not just an isolated institution offering education, we start to design education from the connective patterns of nature. Ecosystemic learning patterns of nature are highly collaborative, synergetic, resilient, and collectively intelligent, and are regenerative by design (see also Wahl, 2016).

Unfortunately, many schools and educational institutions have been forced to be highly competitive and by making themselves stand apart from others, which is precisely what ecosystems do not do. In an ecosystem, the intelligence and capacities of one species becomes interwoven and enhanced by similar and complementary species. The mycelium is a great example, which we will explore further in section 8.3. The intelligence of nature is collectively intelligent by design, and we don’t mean this in any religious way. As a species, our intelligence can be put in question if we apply this ecosystemic perspective of development. This is a valuable topic for exploration with students, at all levels and ages of learning. We offer here a couple of questions for stimulating ecosystemic perspectives of learning and development:

- What can we learn from a forest about how to collaborate and regenerate?
- Why do you think that we as a species are destroying our own habitats and that of other species? What are we not (yet) learning about this or ourselves?
- If we, like our planet and universe, are also a living system, then how can we (better) develop our ecosystemic capacities through education and from an early age?
- How does education need to change in order to facilitate the development of our ecosystemic learning capacities for regeneration and thrivability?

Another topic worth exploring with students is what we can learn from ecosystems about adaptation and resilience. And whether adaptation is always a good thing, or if there are ways in which we are adapting to conditions that are not healthy? You can also provide examples of how people have been adapting to violence, rather than peace, and accordingly have normalized violent behaviour. The same can be said for pollution and environmental degradation. Adaptability is essential, yet it is important to discern the directions to which we are adapting. We offer once again some questions for transformative learning inquiries, in this case to stimulate a deeper comprehension of what we mean by concepts such as adaptability and resilience. Such inquiries can also be applied when using the Anthropocene as a context principle for regenerative learning (see chapter 2):
● How are we forcing nature to adapt to our human impacts?
● How are our planet’s climate systems, forests, oceans, and tectonic plates adapting to the impacts we have created and continue to create?
● Could the COVID-19 pandemic be nature’s response to a larger change-process that we as humans have catalyzed?
● How is nature learning to live with humans?

By exploring how the dots connect and by revealing the many complex interdependencies and interconnections of our interwoven worlds, we can support people to develop an ecosystemic understanding of the nature of reality and the role and responsibility of humans. To ground these explorations, help people to apply their discoveries to their personal life contexts and those of their communities or bioregions (see chapter 8). The questions below are offered to stimulate this application:

● How are you, your family, and the communities you form part of, adjusting and adapting to the ecosystemic changes that we as humans have catalyzed, including climate change and biodiversity loss?
● Are you learning from the harm we are causing? And how about other people in your life?
● Do you believe we are becoming wiser and more mature as a species? If the answer is ‘yes’ or ‘no’, then why and how so?
● Do you believe that it is part of human nature to be destructive? And again, if ‘yes’ or ‘no’, to explore why and how so.

Learning for regeneration and thrivability makes our assumptions about nature, ourselves, and life visible. The multiple perspectives of this Blueprint can be applied for our personal development, as well as for educational transformation, and for developing collective learning capacities for regeneration and thrivability. There is one further quality of ecosystems that we like to bring your attention to, and that is that ecosystems are future-creative by design.

In chapter 4 we will explore in-depth what we mean by “futures” and being “future creative”, however in this section we plant the seed for this awareness. Living systems have innate capacities to learn and develop in ways that new futures become possible. This is precisely what makes living systems different from mechanical systems or algorithmically designed programs. Living systems can change and evolve because they can adjust, attune, and create new behavioural patterns by sensing emerging orders within the complexity of the living systems they form part of. Mainstream economic systems, unfortunately, are by design not able to do so, which makes these systems so destructive (and not adaptive to the feedback of life).

Living systems are informational systems in the literal sense of being formative; creating order from the diversification that is generated by the growth process of life (Capra, 2002; Kelso et al., 1998). Economic and educational systems are also informational systems, yet based on which growth patterns? Growth through competitive dynamics that divide and polarize our natural diversity? Systems that are not coherent with life, cannot create futures for life. It is that simple.
3.3.1 The Five Syntony Spheres of Wellbeing and Transformative Learning

Working group member Alexander Laszlo, developed a valuable integral framework titled “The Synthony Spheres” for describing the evolutionary development of becoming an evolutionary learning ecosystem. According to Webster’s Unabridged Dictionary (1979), syntony can be defined as in radio, resonance, while to syntonize is to tune or harmonize with each other. As such, syntony can be understood as a creative aligning and tuning with the evolutionary processes of which we are a part. Syntony involves listening to the rhythms of change and learning how to play our own melody in harmony with the larger whole. It is about finding and creating meaning and evolutionary opportunity, both individually and collectively (Laszlo, 2015).

Developing a keen syntony sense is not some mysterious art that only a shaman or high priestess can access. It’s like a muscle of your consciousness, but since most of us don’t flex it very often it tends to atrophy. Alexander developed the 5 Syntony Spheres to help people develop and hone their syntony sense (Laszlo, 2020b).

- **The First Syntony Sphere**
  - Focus: The intra-personal dimension of sustainability; thrivability within yourself.
  - Ask: What brings meaning to my life? To what do I feel called to contribute? What are my talents and how can I use them to live into my highest calling?

- **The Second Syntony Sphere**
  - Focus: The inter-personal dimension of sustainability; thrivability with your communities and social systems.
  - Ask: What common cares bring us together? What defines our shared sense of humanity and makes for our shared vision? What do we want to create?

- **The Third Syntony Sphere**
  - Focus: The trans-species dimension of sustainability; thrivability with the more than human world.
  - Ask: What gifts do I receive from nature that I have not acknowledged? What relationships and connections need to be restored? What would a thriving relationship with nature look like?

- **The Fourth Syntony Sphere**
  - Focus: The trans-generational dimension of sustainability; thrivability with past and future generations of all beings.
  - Ask: What would my ancestors think of my work and life? What would our children’s children think of my choices? What does it mean to be a Future Ancestor now?

- **The Fifth Syntony Sphere**
  - Focus: The pan-cosmic dimensions of sustainability; thrivability with the deep dimension of the cosmos.
  - Ask: What messages come to me in flashes of insight and sudden inspiration when I feel truly aligned and connected with something greater than myself? What dreams give me a feeling of déjà vu and what is it about them that makes them seem so familiar?
A deeper understanding of syntony shows it to be a powerful organizing force in societal evolution (Laszlo, 2001). Syntony involves diachronic harmony and evolutionary consonance at various levels of an interconnected complex dynamic system, providing coherence and consistency to change efforts. As explored earlier, transformational change is often not a conscious or deliberate process, but rather emerges from the evolutionary challenges that force us to evolve. Through an engaged syntony-based process it becomes possible to consciously evolve our human development to become more consonant, coherent, and connected with the underlying warp and weft of cosmic emergence and evolutionary consciousness.

3.3.2 Ecological Literacies and Capacities

Ecological literacies and capacities emerge from learning for regeneration and thrivability. Ecological literacies are essentially relational and start by understanding life and evolution as a connective pattern of interdependent relationships (Bateson, 1973; Capra and Luisi, 2014). Ecological literacies include a sustainability context-based understanding of thresholds and allocations as well as a regenerative understanding for how to enhance, expand, diversify, and strengthen the carrying capacities of our physical and social worlds. Moreover, ecological literacies help us develop our extended caring capacities for life as a whole.

Ecological literacies also include an ecosystemic comprehension of human agency, which we will explore in further depth through chapter 5. Furthermore, ecological literacy implies being able to learn, think, act, reflect, care, and evolve as a living system as well as a learning ecosystem.

To complete this section, we offer some questions and comments raised by co-author Bill Baue, which are essential for deepening our understanding of what it means to be a human ecosystem, and whether this also places greater responsibility on developing doctrines such as a regenerative justice system, implementation of constitutional rights of nature in law. Essentially this raises the question: how can human awareness become a key factor in the development of our collective consciousness as an evolutionary learning ecosystem?

Bill Baue: “To what degree do justice and equity issues express themselves in living systems principles? How about the unjust things that happen in living systems? What to do with that in human systems? When applying living system principles to education are there also elements that we want to diverge from as human systems? From an autopoietic perspective, life defines and evolves itself through boundaries and thresholds. In order to avoid this becoming mechanistic, we need to include a more complex adaptive system approach where thresholds are not static but dynamics. From this emerges a threshold consciousness that is lacking in many sustainability conversations.”
3.4 SUMMARY

Learning as Life

Through Learning as Life we explored three perspectives:

1. Three Evolutionary Principles of Life.
2. Five Stages of Transformational Change.
3. Five Syntony Spheres of Evolutionary Learning Ecosystems.

Learning as Life through these three perspectives reveals how learning and development is intrinsic to life and unfolds as a transformative and future creative process that we can apply in education, as well as for our societal development and species maturation.

- The Learning as Life perspectives provide the necessary foundations for developing our ecological literacies and ecosystemic capacities for regeneration and thrivability.
4. LEARNING AS FUTURE

The Sea Voyage Journal – Learning as Future

“What would change if we realized that this destination of the land of thrivability is already part of us right now, and we are part of it? How do you connect with your future state of being? What the new physics and cosmology are essentially revealing is how the future exists already now as information in a state of potentiality. Imagine for a moment how this new civilization that we are sailing towards is part of our journey, we already are this new civilization by the mere fact that we have embarked on the journey.” Anneloes shared as they watched the moon rise above the horizon.

The wind had settled and the boat was sliding peacefully along in the water. Nature revealed herself in full glory. The plankton in the water became illumined as millions of glistening little lights. We were literally sailing through an ocean of light. The stars and moons reflected in the mirror-like ocean. We sailed into eternity. As we looked up at the stars, we realized how these were the same stars that our ancestors had sailed by and that future generations after us would sail by. An incredible sense of unity with the allness of being opened up. We sat in awe, as we connected with the future potentials inside us; sacred treasures of life planted in our hearts by the Cosmos to become our dreams, aspirations, hope, and visions for tomorrow.

Sophie sighed deeply, “This is how we transform our technocratic approach to educating and become the people who can actually change systems in the future. It is this experience that are we are living right now that is the education, when you feel this how can you not be in awe of life.”

“Yeah,” Alexander said with dream eyes. “It doesn’t matter if we don’t know the future we want, what matters is that we know the kind of futures we want to be part of. Including a sense of awe, wonder and sacredness in education. So we can all feel part of an awesome life and living universe. This experience right here is future.”

“This is the education of the soul,” Henk added. “This is how we move from a world of sensations to a world of imagination.”

“The future is already present in each of us and also in our students of today. Our mission as educators is to facilitate them to unleash this future potential,” said Bas.

“This is where our imaginal powers are so important. The imaginal is an actual realm in the Cosmos, the realm of potentiality where consciousness is in a state of unified possibility, a higher order of reality that is within all living systems. It is this imaginal power that makes learning, healing, and evolution possible. Or as the ancient shamans have said, this is how the higher dream dreams us into being.” Anneloes added.

“Splash”, a pod of playful dolphins jumped in front of our boat making this part of our journey truly unforgettable.

“What we’re experiencing right now is the kind of future I want to bring home with me. This is how we develop future literacies by bringing hope to education. Education has become so overburdened with the telling of problems, we don’t inspire enough hope.” Michael exclaimed passionately.
“Yes, hope inspires our passion for the possible!” Ajay added.

“Who would have thought, us sailing here and now joined by a pod of dolphins while sliding through an ocean of light? While on our way to a whole new land that we are yet to discover? If that doesn’t inspire hope then what does?” María said with a big smile.

In that moment all was in allness and so were we.

This chapter explores the transformative perspective of “Learning as Future”, which implies a multiplicity of futures and not just a singular future. The word ‘future’ or ‘futures’ can evoke many different feelings and associations. For some it can bring a sense of hope, inspiration, and possibility. Whereas for others it may evoke images of looming threats, danger, collapse and growing uncertainties. The threefold structure for exploring the various perspectives of “Learning as Future” is:

- The Cosmology of Futures.
- Imaginal Capacities for Exploring Futures.
- Futures Literacies and Future Creative Learning.
4.1 THE COSMOLOGY OF FUTURES

Futures are possibility spaces, imaginal places to dream into and places of higher choice that provide us with the opportunity to envision, renew, transform, and ignite a deeper shift of being and understanding. One of the key challenges for educators will be how to facilitate a sense of hope and engagement in our future becoming, while faced with the knowledge that many probable future scenarios are far from desirable. The planetary situation in which we now find ourselves is grave, and we haven’t even seriously begun to address or reverse our climate crisis. However, approaching this knowledge from a place of fear, anger, and blame will hinder the very creativity that we require in order to resolve and redirect this situation. To better understand the real power of our imaginal capacities, we offer a brief exploration of the ‘cosmology of futures’; which is a living system’s perspective of what futures are.

Quantum physics tells us that information can appear in various states; dualized as ‘either-or’ or in a superposition state of ‘both-and’ (Curriyan, 2017). Research of consciousness studies suggests that the manner in which we perceive and communicate information, whether dualized as ‘this or that’, or unified as ‘both-and’, reflects the states of consciousness that we are in (Penrose, et al. 2017; Smitsman and Houston, 2021). The position of the lead author is that ‘futures’ are ‘superposition’ states of information, quantum states of simultaneous possibilities that enable a system to evolve, renew, and learn (Smitsman and Houston, 2021). If all the trajectories of life were predetermined and predestined, learning would be reduced to a mere algorithm or computational process. However, research in child development shows that children do not make predominantly algorithmic choices, and instead apply their imaginal capacities for initiating new and often unpredictable trajectories that attract their development forward (Smitsman and Smitsman, 2020). One could even say that the very nature of development is our capacity to restructure at higher levels of complexity.

Why does this information feature in a Blueprint on educational transformation? Because it is precisely this future creative capacity that is so stifled in mainstream education, and suppressed in the processes that require us to regroup, rethink, transform, and create the new pathways for regeneration and thriving. In chapter 3 we explored how the structure of reality is informational and how materiality itself is a particular form of information, i.e. digitized information. We also explored how this informational perspective of the universe (emerging from the new paradigm sciences), is a fundamental new understanding of our physical universe and consciousness itself. This informational understanding of reality will have far-reaching consequences for the way we design and redesign our societies, and for how we can learn to live within the planetary and ecological boundaries of our caring and carrying capacities. Through this section we will apply this informational perspective to what we mean by ‘futures’.

If the structure of reality is informational, then it follows that time itself is also a flow of information from potentiality, to possibility, probability, and actualization. Furthermore it follows that the future itself is information that is in a state of potentiality, i.e. meaning the future exists now as informational potentiality. This further implies that the only way to access future potentials is from the present moment, since that’s where our consciousness exists (you may think of the past, but that thinking is happening in the present). The presence of the future within us is precisely our sense of potentiality, which children naturally sense and explore as a developmental attractor.

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26 Cosmologically it can be postulated that the information of futures exists continuously in a holographic state of potentiality that is nonlocal (outside space-time), until it becomes realized locally as we become aware of and engage these future potentials (Curriyan 2017; Smitsman and Curriyan, 2019). The informational state of potentiality is a quantum state of superposition where all possibilities simultaneously exist in higher nonlocal orders of reality (Penrose, ed., 2017; Smitsman and Houston, 2021).
All living systems are designed to be future creative by enabling new choices, new combinations, and new structures from the manifest and potential information that is available within and to the system (Smitsman and Smitsman, 2020). This understanding is essential for transformative learning, in particular for how education can support people to access our future capacities through our imaginal and creative states of consciousness that are the natural systemic fit for accessing our future potential. In other words, you can’t access future potentials in consciousness states that are not resonant with the consciousness state of future information. It will probably come as no surprise that merely thinking of worrying about our future does not make us future creative, and does not catalyze future directed learning. Many great ideas and initiatives fail to manifest because people are not in the appropriate consciousness state for accessing, activating, and engaging our future potentials. The seven Learning Perspectives of this Blueprint have been designed to support us to enter into those appropriate consciousness states and become more future creative.

Now more than ever teachers, coaches, therapists, facilitators, mentors, social workers, (and anyone who is in one way or another involved in facilitation of learning) require to understand how we as humans can access our future potentials. Why? Because, if in times of increasing crisis and systemic collapse we don’t know how to activate the presence of new thrivable structures that can carry us forward, the likelihood of whole system transformation through systemic breakdown increases significantly. If we continue on this trajectory towards systemic breakdown untold suffering and hardships will follow, and we are clearly not prepared to deal with that. Systemic breakdowns can also take the shape of depression, suicides (attempts), violence, conflicts, mental and physical diseases and disorders, revolts, war, and loss.

Accordingly, we now apply the 5 stages of transformational change from section 3.2 (figure 2) to form a process of 5 stages (figure 4) for bringing our future potentials into being.27

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27 See for a full exploration chapter 8 of The Future Humans Trilogy, Book 1: The Quest of Rose, by Anneloes Smitsman & Jean Houston – https://www.futurehumans.world/
Table 4 below offers a further exploration of these 5 stages or steps through a series of questions for exploring how education can empower our future becoming? Namely, by applying these design principles of living systems, so that educational systems become future creative and not merely factories of doctrines and rigid curricula.

Table 4. Transformative Learning for Future Becoming

<table>
<thead>
<tr>
<th>Stages</th>
<th>Living Systems</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future Potential</strong></td>
<td>Living systems embed future potentials in imaginal states that enable transformation and renewal.</td>
<td>How can education support people to access their future potentials and develop their imaginal capacities for doing so?</td>
</tr>
<tr>
<td><strong>Future Possibility</strong></td>
<td>Living systems enable exploration of various future possibilities through collaborative learning.</td>
<td>How can education support people to explore the various future possibilities collaboratively, and give expression to these as possible visions, goals, and aspirations?</td>
</tr>
<tr>
<td><strong>Future Capacities</strong></td>
<td>Living systems develop capacities and sensory organs for bringing their activated future potentials into being. This also evolves the goals and directions of a system, and dissolves former structures and goals that are no longer sustainable.</td>
<td>How can education empower people to develop their future capacities and sensory organs of their future becoming? How can education support the release and dissolution of former ways and structures that are no longer sustainable? How can learning evaluation serve as a sensory organ for providing meaningful feedback to emerging potentials and new (future) capacities?</td>
</tr>
<tr>
<td><strong>Future Embodiment</strong></td>
<td>Living systems integrate and embody future states through new stances, structures, and processes that form feedback loops for emerging new capacities and become the new behaviours of the system</td>
<td>How can education support people to integrate and embody their newly emerging future realities? How can the system of education become a feedback loop for recognizing, acknowledging, and possibly rewarding the emerging future realities in evaluations, testing, bonuses, and other incentives?</td>
</tr>
</tbody>
</table>
Stages | Living Systems | Education
---|---|---
New Reality | Living systems are fertile and generative; adding more value for life as a whole and sustaining the continuity of life. | How can education help people experience these new realities in sensory-rich and tangible ways? | How can education communicate, celebrate, and share the stories of our future becoming? | How can education help people to become regenerative and redistributive for life as a whole?

Future potentials become realized in life as whole realities.

4.2 IMAGINAL CAPACITIES FOR EXPLORING FUTURES

During a conversation between the then 8 years old Jean Houston, Albert Einstein, and the other children in her class, the children asked Einstein how to get intelligent like him. He answered, “read fairy tales!” When they asked him how to get more intelligent than him, he replied, “read more fairy tales!”

Einstein was not only a scientific genius he was also a musician and was well known for using his imaginal powers to unravel some of the greatest secrets about our Universe. Jean Houston proceeded to become one of the principal founders of the Human Potential movement, where she applied her understanding of our imaginal capacities as her primary focus in education. During her talk to the Art Educators in New Jersey, October 2016, she explained to them:

> “An education for this new time would also require that children learn to self-orchestrate along the continuum of states of consciousness, traveling interior highways through realms of fantasy and imagination, spelunking through caves of creativity. We have discovered that consciousness has many states, apart from that half-awake state we call ‘normal waking consciousness.’ Some states are hyper-alert, allowing one acute focus and concentration. Others grant access to states of high creativity. And then there are those states in which the personal self seems to disappear and one enters mind at large – a Unitive condition in which one discovers oneself to be the knower, the knowledge, and the known.”

> ~ Jean Houston, 2016.

As mentioned earlier, living systems are also imaginal systems, which is the basis for how living systems are able to transform and renew themselves. Life is not deterministic and cannot be programmed. Accordingly, the imaginal is not just something that is unique to humans, life itself is imaginal! Our imaginal capacity is precisely what distinguishes living systems from machines and robots, and even artificial intelligence. Consciousness, as physicist Sir Roger Penrose explains, is not just algorithmic or computational (Penrose, 2020). Instead, it is a process that leads to understanding which enables us to make choices in ways that are not deterministic, which can also result in the most unexpected outcomes.
Our imaginal capacities extend beyond our imaginative capacities. Imagination is often attributed to internal mental states through which people can fantasise, visualise, or imagine things. Imagination can start the process for connecting with the imaginal, however the imaginal is a realm in consciousness that is nonlocal (non-physical and not in time) and goes beyond internal mental processes. Imaginal consciousness are nonlocal states of consciousness that connect us directly with the infinite potentials of the unified field of consciousness and help us access the deeper transformative powers of life. People experience this as a sense of flow, higher or cosmic coherence, unity, deep intuition, lucid dreams, depth perception, altered states, synchronicity, alchemy, and awareness of the simultaneous co-arising nature of reality and simultaneity of past-present-future from timelessness.

It is through the imaginal realm within us that the presence of future potentials can be felt, intuited, and sensed as future possibilities. Once activated, these future potentials stimulate a flow of new ideas, and perspectives, which form the basis for developing our future capacities. As the poet Rainer Maria Rilke wrote, "The future enters into us, in order to transform itself in us, long before it happens." By imaginally engaging the future we in-form the new structures for manifesting our futures. The future of life enters us into our daily reality as inspiration, ideas, dreams, reflections, and realizations, as well as our innate desire to learn and develop.

When we nurture in people their desire to learn, grow, develop, and evolve we are nurturing their future becoming. We recommend as part of that process to develop awareness of multiple future possibilities; those we desire, those we can’t even perceive or sense (as yet), those we don’t want at all, and those future possibilities we don’t quite understand. Each of these future possibilities enter our awareness as glimpses of feelings, thoughts, questions, dreams, visions, and ideas. The potentials we feed and energize with our attention are also the futures we help to become real. Although multiple choices are in our hands, we have barely begun to understand the power or implications of our choices. For education to become transformative, it needs to act as an attractor, a lure for our future becoming.

To summarize, it is through our imaginal states of consciousness that we access and become aware of the presence of the future in us and within life itself – here and now. Futures literacy begins by developing our imaginal capacities, and by structurally leaving spaces open within ourselves, and the systems and cultures we form part of, to dream the higher dream and receive our future guidance. This is especially important for those educational systems that have become too analytical, result oriented, rigid, bureaucratic, and stuck in factory modes of learning. We can by design make it possible for people to experience transformative realities, but not by imposing rigid systemic structures and predetermined learning modes and testing. Developing capacities for regeneration and thrivability begin by being supported and ‘allowed’ to be imaginal and imaginative.28

28 See also https://www.roihopkins.net/
4.2.1 Backcasting from our ideal futures

Backcasting is at the core of the r3.0 methodologies for transformation. Backcasting works from ideal or optimal futures and builds the bridge backwards in time, rather than using the present to plan forward towards desired future outcomes. By starting from the futures we desire, it is easier for people to enter into an experiential engagement of the learning processes for realising these futures. Our experience of possible futures can provide inspiration, hope, and commitment, which is especially important when the present states are full with challenges.

Source: Backcasting: A Roadmap to Transformational Change by Sustainable Brands Sustainable

This Educational Transformation Blueprint adds a new element to the already existing r3.0 backcasting methodology, namely, to deliberately enter into imaginal states of consciousness in order to sense and activate the future potentials of a possible regenerative and thrivable world. Accordingly, the activated future potentials of these ideal futures can now become an experiential reality within us through which we learn to shift our perspectives, thinking, being, and acting. When learning enables exploration of possible futures, learning becomes future creative (Smitsman and Smitsman, 2020).

Backcasting from our ideal futures is one of many other future creative methodologies. For example, we can also explore emergent and probable futures, and futures we don’t want, or those that are unknown to us or perhaps really strange. This variable approach has been applied by the Futures Literacy lab.

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29 For example through envisioning practices, inquiry, sensing, and creative imagination.
30 See also https://library.oapen.org/handle/20.500.12657/30271
31 See https://en.unesco.org/futuresliteracy/about
4.2.2 Imaginal Practice for Envisioning Multiple Futures of Education

On April 5th 2021, the members of the working group explored the following imaginal exercise for envisioning together the future of education of a more evolved civilization. We acknowledge that it would have been interesting to also explore other possible futures, including least desirable futures or futures we want to avoid. However, due to time constraints we were not able to explore all of these. For other processes and practices for exploring futures, please see the methodology of the Futures Literacy lab.32

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Visioning Practice for Journeying into the Future of Learning
by Anneloes Smitsman

This practice serves to enter you into the imaginal state of your future potentials. You will now be guided to connect with these future potentials inside you.

"Trust that you are born with the capacity for entering into imaginal consciousness. This capacity is effortless and as natural as breathing. You have done it many times before already, yet perhaps not realizing this was happening. Relax your mind and body, and release any tensions or expectations. Now give yourself permission to spontaneously experience any visions, feelings, sensations, or senses that emerge. No need to analyze any of it, just simply let it flow.

Relax and take a deep breath. Make yourself utterly receptive now, relax your mind and create an inner space for experiencing something new.

Make yourself really receptive, open, and available to the future, to what is calling us to explore future possibilities of learning for regeneration and thrivability. Trust in the deeper wisdom that is guiding this possess.

Take a deep breath and connect now with your future potentials of a world and time where humans are regenerative, and have learned how to thrive together and with our planet. Trust how these potentials already exist within you as a possibility for us to experience and co-create.

Now feel your imaginal powers activating as you enter more deeply into the imaginal state of consciousness. You now have the capacity to transcend and transform any activities of your mind and go deeper.

Now imagine how the future potentials of a more evolved consciousness starts to activate within your future potentials. Feel this activation growing stronger, awakening whole new possibilities and forming a bridge between where you are right now and the futures that are just beyond the horizon of your mind, even beyond what we currently know.

This future of a more evolved consciousness is inviting you now to go on a journey. Imagine how these future potentials grow into a sphere of light, an orb that manifests in front of you. This sphere of light invites you to enter, and becomes like a wondrous vehicle that enables you to transport to a time and place further into the future where it will be sharing with you the future of learning from this more evolved state of consciousness.

With the help of this travelling orb, enter the world of this future possibility. Now that you have entered this future world, allow it to share with you the new ideas, understanding, visions and feelings that help you understand the future of learning and the greater possibilities for our education.

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32 See https://en.zukuenfte.net/ and The Futures Literacy Labs
I will now give you five minutes of clock time, equal to all the time that you need, in order to receive, explore, and learn from this future world [wait for 5 minutes].

You may now return via your travelling sphere or orb of light to our present time. You can bring with you whatever it is of this future world that can support you in our present world.

Enter fully into our present time now, being fully present in your body – here and now. Feel your body and when you are ready and fully present, you may complete this practice by opening your eyes and gently moving your body.”

Write down your experience and anything that came to you during this practice.

4.2.3 Harvest of Group Visions

After this visioning practice the working group members shared their experience. There were several common themes in the visions people experienced:

1. The contrast between the flowing states of new possibilities as well as the states of fear from impending threat of collapse and overwhelm. This fear was not prompted by the visioning instructions, and yet several people experienced it.
2. The element of outdoor nature based learning and the collective learning experience.
3. The absence of hierarchical structures between learners and educators, so much so that people reported that it felt like everyone is a learner together.

- Ralph Thurm – “I was surprised about the images that came, they were all outside, I was never in a room. This was surprising to me because education, as far as I experienced myself, was for the majority taking place in a room. The other thing that struck me was how collaboration really frees you from the idea that you need to have rights. Obligations are not a burden when you’re collaborating. And you have that obligation because you collaborate and your rights are taken care of by the collaboration and by the community that you collaborate with.”

- Louis Alberto Camargo – “I started in the present urban setting within the classroom and instantaneously experienced how nature around the city just flooded the city. Understanding the relationship between cities, nature, and learning became really important. Learning within community spaces full of nature inside cities or in rural areas. I also saw learning in terms of free play and how play guides learning. Teachers were more like guides in the learning and discovery process. Then the threat came and I think this was something that was fundamental, which was fear. The motivating barrier that blocks everything, and turns us into that state of encapsulating everything, was fear – fear of others, fear of the system, fear of not having what I need, just fear. Those two things were really prominent, one liberating and the other one that set us back to the Stone Age.”

- Alexander Laszlo – “I moved into this sphere as the future possible, thinking of this notion as the adjacent possible; it is right here now, it is with us now. The ‘adjacent possible’ as in Stuart Kaufman’s idea that there is a parallel potential reality that if we just changed something right now, we would be there. My entire flow of the educational environment was outdoors, and it was always on a river. That was beautiful because it was connected to all the sides of the landscape around it, we were flowing, and learning and connecting. The three words that came up for me were: 1. Affordance, the affordance of life and of context, 2. Allowance, which is non-impositional, a listening into, and; 3. Enabling. Very different kinds of core values from the current education. I also saw the fear component, because on the river there was a lot of garbage, that was like the current sit-
uation which we had to navigate around, and through, and transcend, because there was literally a lot of pollution garbage on the river. That made me think of current realities, that we can idealize our future, but we're still going to be dealing with a lot of dysfunctional structures, and conditions that have been given rise to in our current learning dynamics, in order to engage with this type of transcendent education. Organic education was a big part of this theme, that it is truly an organic emergence of learning."

- **Henk Hadders** - "My vision was about evolution. We had the first phase of matter, then life and I felt that the new future of education is all about the next evolutionary step in life. And that is the story of soul. Because we are moving from a world of sensations towards a world of imagination, and it has to be about unlocking the ultimate potentials of humans in order to come together and to solve all issues and problems. My three words are oneness, connectedness and deep love."

- **Dave Pendle** - "I first experienced the fullness of life, of being fully alive and adding life. Oriented to the inner condition of what the promise of education. Being more fully alive, and experiencing life to the fullest you can on the human spectrum of possibility. Then this comfort and celebration with uncertainty, this kind of dancing with paradox. After that a deep connection to the kind of mystery and being, and the evolution of consciousness of the whole spectrum of the whole evolutionary development present in my experience in that moment. My connection to that was enhanced through that future exercise."

- **Bill Baue** - "The two elements that I can add are the intergenerational and the somatic. The younger generation was leading as compared to following. And learning was embodied, the somatic element balanced the sort of cerebral intellectual notion of learning that we embrace now. There was much more body movement happening as compared to just sitting and receiving."

- **Michele Maynard** - "It was the flourishing on the inside, being drawn on what I was passionate about that was drawing me and sparking my interest, that causes an alive and thriving, flourishing energy on the inside that was spilling over everywhere. That was the same kind of thriving energy as wonder, awe, and passion. Everything was so exciting. I also saw fear that suddenly caught me and almost like us needing courage for that next step. I also had a very embodied kind of experience."

Keywords that were harvested from these imaginal futures are:

| collaboration, community spaces full of nature, discovery, learning as a river, affordance, allowance, enabling, oneness, connectedness, deep love, next stage of evolution of consciousness, fullness of human spectrum of possibility, dancing with paradox, somatic, intergenerational, flourishing energy from the inside that activates awe, passion and wonder, and courage for the next steps. |
4.3 Futures Literacies and Future Creative Learning

“The future exists in the present as information in a state of potentiality, which can be activated imaginally or through the transformative dynamics of present conditions of change.”

~ Anneloes Smitsman

This informational understanding of the presence of the future, is radically different from seeing futures as something that does not yet exist, or can only be anticipated. Future exists now, yet in an informational state of potentiality that is nonlocal. Anticipatory systems and processes can help us sense and activate future potentialities by shifting our present state of consciousness into an imaginal future state of consciousness. It then becomes possible to actively sense and explore the information of future possibilities.

The UNESCO Futures Literacy Framework (FLF) and Futures Literacy Laboratories (FLL) provide many valuable guidelines for using anticipatory processes for exploring multiple futures. By combining imaginal and ecosystemic capacities we develop our capacities and understanding for co-creating thriving worlds and futures.

We further recommend that education helps people become future literate by knowing how to work with future trends and patterns that relate to skills and capacities for a rapidly changing world (WEF, 2020). This also includes knowledge of new and emerging innovations (Spencer-Keyse et al., 2020). As explored in the earlier sections of this chapter, future potentials get activated by a combination of:

- Necessity for change conditions, and;
- Imaginal engagement of our future potentials as future possibilities.

By learning how to engage future potentials imaginally, we also develop the capacities for working with complexity. Imaginal states, as mentioned in chapter 2, are able to integrate and process greater amounts of information without this leading to overwhelm, because these are states of higher complexity. Developing an experiential understanding of higher and more complex orders of reality, are essential for developing becoming ecologically conscious and capable. This is precisely what is often lacking in mainstream education, and thus essential for future education.

The COVID-19 pandemic radically forced people to adopt new communication technologies for enabling people to continue working and learning from home. The potential for these technologies existed for years, however the necessity for change now catalyzed the employment of these technologies at scale. People who had already started to explore digital learning and working options, and were aware of future trends, had less challenges adopting to and forming new normals.

See https://bit.ly/36LIEkJ
4.3.1 Developing Future Creative Capacities

Now more than ever it is essential that we develop our future creative capacities in order to stop repeating the painful lessons and patterns of the past. We know very well how to design a world that doesn’t work, a world that is not regenerative. We also know very well how to create wars, divisions, and destroy our habitats. Let’s truly learn from all we have set in motion, and change the experiment to learning how to create a world that does work for all and is regenerative by design. However, to achieve this major shift we have to become the required people first. We cannot just design our way into the future, we first need to learn how to embody and become the future consciousness of a regenerative and thrivable world.

Living systems are naturally future creative by enabling emergence and by creating possibilities for new possibilities. We too are living systems, and we often forget that from the onset of our human life we have been learning rapidly and in ways that allowed us to develop our future potentials. Human learning and development is naturally future creative, if not stifled by education, economic expectations, and cultural dogmas. From birth onwards children learn to explore, engage, and evolve the potentials of past, present, and future information within themselves and their environment (Smitsman and Smitsman, 2020).

In other words, we have many innate capacities and potentials available that we can learn to direct and engage differently. To support people (and yourself and each of us included) to develop our future creative capacities, we offer the following guidelines:

- **Enact and embody the consciousness states of your future potentials** – You can only activate a future potential from the consciousness state of that future potential, and not from old patterns or modes of consciousness. Just like the imaginal cells of the butterfly start to form through the butterfly consciousness of a winged creature, and not the caterpillar modes of a crawly creature.

- **Become an imaginal cell for a regenerative and thriving world** – Look for ways that you can link-up with other imaginal cells to form the imaginal organs of our future becoming.

- **Become aware of what you in-form with your intention and attention** – By shifting your intention and attention you can shift the way information flows and manifests within and around you. Invest in the future of a thrivable world by applying the power of your intention and attention wisely and consciously.

- **Actualize regeneration and thrivability by embodying this in your life** – Become the world you wish to live in. Explore how you can embody the future potentials for regeneration and thrivability and activate this within the systems and cultures you form part of.

- **Shift your stance to shift your experience of reality** – Your stance is a combination of your attitude, posture, and ways of being and relating in the world. When you shift your stance you literally change the flow of information within and around you, which also shifts what you attract and engage from the field of possibilities. New stances create new futures.

Facilitating learning for regeneration and thrivability begins with each of us. We inspire learning by living these realities ourselves. Nobody else can develop the future creative capacities for us, this is a journey we each need to take and together. We all need to embark on this **Sailing Voyage to the land of thrivability.** Ecological awareness begins with self-awareness and listening to the feedback of life. One of the primary capacities for developing our future creative capacities are our sensing capacities. We each are born with multi-sensory capacities, yet unfortunately many children are discouraged at a later age to explore those capacities further (see also Gibson and Pick, 2000; Smitsman and Corbetta, 2010).³⁴

³⁴ For more information you can also explore “54 natural senses and sensitivities”, https://bit.ly/37MTR3u
In order to develop our future creative capacities, it is essential that we also develop multiple intelligences synergetically, and not in silo or disjointed as is often the case in mainstream education. The following image and message by Christopher Chase, provides a useful overview of Howard Gardner’s Theory of Multiple Intelligences, who proposed at least 8 forms of intelligence that we as humans have potential for, and many of which we share with animals.

“Every human being has unique and unknown capabilities. Educational systems that prioritize a narrow range of skills may cripple our creative potential, create artificial expectations for our children and keep all of us from developing fully. There is much evidence to support the idea that greater happiness and life success comes when we are given opportunities to master a wide range of skills, when each of us is in sync with our own unique symphony of talents. The failure of modern cultures to prioritize all the intelligences equally could help to explain many of the seemingly “unsolvable” problems that surround us: perpetual warfare, environmental disasters, rising poverty, violence, inequality, materialism, consumerism, addictive behaviors and other forms of suffering.”

~ Christopher Chase, 2014b)

35 See Christopher Chase’s article on this topic – https://bit.ly/3m7qZvm
4.3.2 Resilience as a future creative capacity for thrivability fitness

There is one additional ecosystemic concept that we will explore for Learning as Future, which is the concept of resilience. The more formal definitions of resilience tend to focus on the capacity of a system to bounce back (or return to an earlier state) by recovering from internal or external shock. We propose a developmental understanding of resilience from a living system’s and future creative perspective.

Living systems do not just adapt and self-regulate their internal dynamics in response to shock or change (conventional understanding of resilience), they also learn from inner and outer shocks by developing new stances and behaviours with a greater future-fit for accessing and exploiting the informational potentials that become available during change. In other words, resilience is essentially a developmental learning process that is also future creative (Smitsman and Smitsman, 2020). This evolutionary understanding of systemic resilience is essential for the (re)design of our educational and economies systems and curricula. This developmental understanding of resilience is also essential for education for survival-preparedness.

While faced with increasing possibilities of irreversible eco-systemic collapse and runaway climate change (IPCC, 2021, 2018; Steffen et al., 2018), it can be tempting to prepare for tomorrow by solely focussing on survival-preparedness. The mindset of survival tends to lock people into dualistic stances, which hinder our transformative capacities (see section 5.1.2). When people aim for surviving, rather than thriving, their focus becomes more short-term focussed on securing against risks and threats. Resilience, however, is essential for survival-preparedness, yet not by only focussing on protection from shock or aiming to return to earlier states. Instead, resilience as a developmental capacity makes us more innovative and creative to work with shock as transformative potential.

Accordingly, survival preparedness is best to be developed within the larger context of thrivability fitness. Education for thrivability fitness prepares people to work with collapse and death in life-affirming and thus regenerative directions. Namely, by exploring the opportunities that collapse and death afford for generating new systemic patterns that are more conducive for life to thrive. The saying that “to live more fully we need to die a little each day”, is fitting in this context.

To complete this section, we recommend for educational institutions and programs to develop a three-fold focus for their curricula and learning processes, which are essential for regeneration and thrivability:

1. **Facilitating death and transition** – Support people to understand and trust in the necessary role and purpose of death for enabling new cycles of life. Initiate an honest and supportive inquiry about what needs to die from within ourselves and in our human worlds in order to become regenerative and stop the ecosystemic collapse that we are causing. Facilitate learning conversation for how we can die with dignity and transition between the various stages of death and new cycles of life.

2. **Facilitating regeneration and healing** – Support people to understand the vital conditions for regeneration and healing, and how we are each born with innate healing capacities. Apply the 13 qualities of life for exploring how we can regenerate our human consciousness to become as life, and for how we can apply this ecological awareness for the regeneration and healing of the ecosystems and cultures that play an essential role for our planetary wellbeing, health, and prosperity.
3. **Facilitating birth and emergence** – Support people to understand how new life comes into being, from conception to birth and onwards. Facilitate learning that develops our awareness of emergence, and our nurturing capacities for assisting new life to come into form and enter our world. This can apply to new human life as well as to conception and the birth of new ideas, projects, or any other living beings who require our help to come into the world. Apply the actualization process of the 5 stages of future becoming for ‘midwifing’ and nurturing the birth and emergence of new future possibilities that can evolve our systems and cultures towards thrivability.

### 4.4 SUMMARY

**Learning as Future**

Through *Learning as Future* we explored three perspectives:

1. The Cosmology of Futures.
2. Imaginal Capacities for Exploring Futures.
3. Futures Literacies and Future Creative Learning.

*Learning as Future* through these three perspectives offers an integral exploration of the presence of the future in each of us and how to engage this for evolving the systems and cultures we form part of. These perspectives also support us to develop our future literacies and become future creative, by developing our imaginal capacities and facilitation of death and transition, regeneration and healing, and birth and emergence.

* The *Learning as Future* perspectives provide the necessary foundation for developing our future literacies and future creative imaginal capacities for regeneration and thrivability.
5. LEARNING AS AGENCY

The Sea Voyage Journal – Learning as Agency

“We need to be careful how we bring in change and how we talk to the people that bring in change. We need to work with the base of the pyramid and not just the top. The dance of consciousness. To first put ourselves into a more receptive and flexible state, a unity state of consciousness. When part of our brain is shut down, we become defensive, we can’t learn, we don’t hear each other, and we can’t work harmoniously together. Help people to learn how to attune themselves to that unity or Oneness. That is education. Otherwise your brain fights. Without this receptive preparation all this work we’ve been doing remains merely intellectual. And how do we share these messages so that everybody can understand it and feel invited and interested to become part of this?” Kurt said while we prepared the boat to enter the harbour.

“Who here speaks French or Spanish?” Henk asked, concerned that English may not get us far with the harbour master, who seemed not to understand our earlier communication.


“I really don’t know how to make sense of all these rules and regulations they sent us. Do they have to make it so complex?” David pitched in. “You mean, complicated, not complex.” Walter added. “Yes, whatever...” David murmured.

“I wish we could go back to the open seas,” Maria added, “It’s funny how I actually feel anxious about putting my feet on land again, after all those weeks.”

“Yes, me too,” Luis replied “I’ve really enjoyed this time away from cities and the hectic pace of modern life and this digital detox. I’m not looking forward to all that noise and pollution again.”

“Don’t bring the city into your minds,” Kurt replied. “Remember your state of mind, keep the ocean inside you. Don’t become the city.”

We all felt slightly anxious, each of us for different reasons, knowing that the world was about to enter into our lives again for the coming days. We’ve been three weeks non-stop at sea. The first week took a lot of adjusting and then we got into the flow and routines and it became remarkably relaxing despite the short sleep and often challenging conditions.

“Remember that message from the bottle?” Anneloes asked the group. “Perhaps this is the time to practice Learning as Agency, and explore the states of consciousness this enters us into. She continued, “We’ve been developing all these new capacities over the last weeks and we’ve entered into so many new experiences, how do we now apply this through our transformative agency? Rather than feeling anxious and unsure, how can we share this incredible transformation we’ve all gone through with the rest of the world, and make the world part of our experience?”
This chapter explores the transformative perspective of "Learning as Agency, which focuses on the kinds of explorations that inspire, evoke, and empower the development of capacities and competencies for applying these new perspectives in transformative ways. The three-fold structure for this chapter is:

- Transformative Agency.
- Bildung and Stewardship.
- The Governance of Agency.
5.1 TRANSFORMATIVE AGENCY

Working group member Robert Dellner mentioned how, “Pedagogy will play a role in including and allowing each individual to enter and exit at their potentials.” Knowing that every student will be at different points in their development, how can we support their transformative agency with differentiated flexibility? Standardization of curricula, evaluations, and exams greatly hinder more flexible entry and exit points for students. Agency from a living system’s perspective implies a certain degree of autonomy for being able to adjust and self regulate. Standardization of education does not afford transformation agency and hinders people to become conscious of their unique potentials and the conditions for them to thrive.

Through the following sections we will share several perspectives and ideas to deepen and refine what we understand by “transformative agency” within the wider context of Learning as Agency.

In chapter 3 we have explored various stages of transformation, through the next sections we will explore some of the states of consciousness that influence how we develop our capacities of agency.

5.1.1 Learning to Embrace Paradox

“Things have gone rapidly downhill since the Age of Enlightenment, for, once this petty reasoning mind, which cannot endure any paradoxes, is awakened, no sermon on earth can keep it down. A new task then arises: to lift this still undeveloped mind step by step to a higher level and to increase the number of persons who have at least some inkling of the scope of paradoxical truth. We simply do not understand any more what is meant by the paradoxes contained in dogma.”

~ Carl Jung

A paradox is a seeming contradiction that challenges our dualistic tendencies. Life is paradoxical, which we often experience as a kind of tension or unease. It can be tempting to avoid feeling these tensions by escaping into either dualistic thinking or else superficial unity. Our development as a species is full of paradoxes, while on the one hand we have made tremendous progress in terms of capacities and technologies, we have also become more unconscious of our role and place as humans in the bigger scheme of things and we have grown more destructive. This is paradoxical. Supporting students to explore and embrace paradox as a transformative learning process, is an essential step towards developing transformative agency. We cannot transform or facilitate transformation unless we can embrace paradox.

The following questions can support students (and educators) to explore their comfort zone about paradoxical situations:

1. What does the word ‘paradox’ evoke in you? How do you feel about paradoxical situations?
2. Are there any paradoxes you simply cannot accept?
3. How can the perspective of a paradox help you reconcile what previously may have appeared unacceptable or irreconcilable to you?
4. In what way is your life a paradox?
Transformative agency requires the capacity to stand in wholeness together, and act from the deeper unity that we have explored in the previous chapters. Accordingly, dualistic thinking is by design not transformative, as it attempts to divide or polarize our diversity rather than embrace it. Paradox is really a great litmus test to assess our states of consciousness and thus the impacts of our thoughts and communications on others. The growing social tensions around the world show how quickly our stance towards each other can become polarized. When we cannot work with paradoxical feelings or situations we will create or feed divisions between people, and some of these divisions are entirely fabricated and based on “false truths.”

We can teach people to hate as well as to love. How are we facilitating and supporting ourselves and other people to become aware of our states of consciousness, expectations, and the dynamics we each feed in the world? Learning through paradoxes is also essential for developing new narratives that help us to work with complexity. As Carl Jung indicated in his work, it is only by learning to embrace the paradoxes of life that our consciousness grows and develops. Through the following section we will offer various strategies for how to use a paradox to evolve our consciousness and transform dualistic approaches.

5.1.2 Facilitating Third Way Solutions

“Nature teaches us the importance of finding ways to bring seemingly conflicting opposites into harmony without destroying either of them. This claim stems from a worldview derived from diverse Indigenous Peoples whose ancestors also our ancestors studied nature deeply and holistically for hundreds of thousands of years.”

~ Donald Jacobs, Four Arrows (2016, p.177)

Third Way approaches and solutions emerge from embracing paradox and transforming duality traps. The Third Way concept that is applied in this Blueprint (and elsewhere in r3.0) is based on the Ph.D. research of the lead author, Anneloes Smitsman. Underlying many of our sustainability issues are dualistic stances of either-or assumptions and polarized thinking. By adopting a Third Way approach, we make a commitment to shift our consciousness out of the type of thinking that blocks and limits our transformative agency. Third Way approaches also offer pathways for the deeper civilizational transformation that lead to a renaissance of self and society. A third way is the new that emerges (is born) from transformation through paradox. Third ways emerge as our integral awareness develops and we no longer dualize or polarize our diversity. Rebirth only becomes possible once this integration has taken place and we stop projecting outwardly what we’ve rejected internally.

Hence, civilizational transformation goes much deeper and further than the change of certain societies, cultures, and communities. Civilizational shifts are characteristic of a new Zeitgeist, a new era, and most of all new coherence of global consciousness. Third way approaches create evolutionary spaces for this deeper process that facilitates transformation, renaissance (rebirth), and emergence.
The following learning practice supports the development of transformative agency through Third Way perspectives (Anneloes, 2021):

1. **Become aware of dualistic polarization dynamics**, which can play out as dualistic cause-effect narratives, either-or thinking, division, conflict, fragmentation, win-lose zero-sum game competition, and oppositional dynamics. *Acknowledge what is happening* (also beneath the surface) and honestly assess your personal investment in any of these dynamics. Proceed to create clarity about what is going on and why.

2. **Look for a ‘third’ middle ground** by focusing on ‘and-and’ perspectives, and by working with the architecture of wholeness behind seeming dualities. *Consider the deeper causes* as to why a transformative perspective or experience may have become blocked.

3. **Create a safe and generative space** that makes it possible to heal what has become revealed, including any divisions. *Keep an open mind and heart to multiple perspectives*, including those you do not understand, while exploring collaborative approaches.

4. **Test assumptions** through a *future planetary perspective* to deepen inclusiveness – i.e. is what we normalize or propose natural, desirable, and thrivable from the widest and deepest perspective of life as a whole?

5. **Check your commitment** towards building our world from the foundations of life and the co-creation of thrivable societies. How does this process live within you, and what is your commitment to become the required person for this change?

### 5.1.3 Working with Complexity

Sustainability issues are complex and so are people! And humans can also be incredibly complicated, yet that is not the same as complexity. Complexity relates to the degrees of nested interconnections and interdependencies (within and between systems), as well as non-linearity. Complexity sciences, System Dynamics, and System Thinking form integral components of education for regeneration and thrivability, and offer valuable methods and methodologies for supporting learners to work with and embrace complexity.

All living systems are complex nonlinear systems. In a world of growing complexity, life can also become complicated, especially when we do not understand how to work with non-linearity and unpredictability. As such, higher education institutions are becoming increasingly aware of the need for an integral systemic approach to researching complex issues. There is a growing trend for combining basic and applied or action research in order to empower students with tools and capacities for developing a systemic approach to research and innovation (Brundiers & Wiek, 2010).

Transformative agency is a path towards higher complexity, which actualizes through deepening embodied wholeness. What this means in practice is that a person is able to hold, integrate, and weave various perspectives and approaches, with an inclusive attitude and a deepening sense of and appreciation for the underlying wholeness and unity of life. With this also comes a sense of maturity, care, and wisdom, as well as the ability to listen deeply, and with openness to continually learn and develop. In other words, developing our transformative agency is a lifelong learning process, which extends far beyond the boundaries of schools or formal educational programs.

Working with complexity also includes working with uncertainty and transitions. In particular for embracing the creative tensions between that which is concrete and perhaps even dominant in our present reality, and that which is seeking to emerge as a new reality and is not yet tangible or visible for others. Especially when these future possibilities are situated right on the edge of emergence.
We cannot learn to work with complexity through solely a mental focus or intellectual pursuit. Complexity is integral, hence only an integral learning approach can help us to develop integral capacities for working with complexity. This includes the development and synergy of various ways of knowing, sensing, intuiting, thinking, feeling, being, and acting. For those working as educators or learning facilitators, we highly recommend including processes for developing our multiple intelligences and systemic sensing skills (Smitsman, 2019). Furthermore, learning how to work with complexity is essential for developing our stewardship capacities, which requires balancing multiple realities simultaneously with care for the thrivability of life as a whole.

5.2 BILDUNG AND STEWARDSHIP

Bildung is a German concept that focuses simultaneously on the inner and outer transformations, as well as the development of personal and collective capacities. Bildung as an educational strategy places the focus for our inner transformations within the larger context of our outer societal transformations. The authors of the book “the Nordic Secret” describe Bildung as follows:

“Overall, we thus find it justified to claim that Bildung in the form of folk-Bildung can change societies. We also find that Bildung is a more complex and much more comprehensive concept than ego-development regarding the many aspects of personal development and learning we must go through in order to find meaning, purpose and a sense of belonging and to thrive in the complex world that surrounds us. Bildung is freedom and responsibility; responsibility is freedom and Bildung; together they produce happy people, robust societies and strong economies.”

~ Lene Rachel Andersen and Tomas Björkman (2017, p.345)

The Nordic Secret of the Scandinavian cultures shows what can become possible when we include our inner transformation for our outer societal transformation, through a conscious learning and development process. The stage has already been set for our collective rite of passage through growing risks, insecurities, and imbalances. How we rise to this occasion will determine whether we become the attractors for chaos and breakdown (the anthropocene context), or a collective birth (renaissance context) into new stages of consciousness.

The Bildung perspective of freedom as responsibility and responsibility as freedom is essential, and often lacking in the more superficial aspects of our modern cultures. Bildung as a developmental focus embraces complexity and can provide the foundation for developing a consciousness of stewardship through which we also learn to embrace the evolutionary tensions in many of the paradoxical stages of our formative process.

During the working group sessions Alexander Laszlo and Frederic Barge co-authored this about stewardship:

Alexander Laszlo and Frederic Barge: “The concept of stewardship rather as a way of curating potential. Curating is about listening to what is seeking to emerge and listening to potential. Creating conditions that are healthy to this emergence. This is the kind of stewardship that works with uncertainty, and does not proclaim “follow me”. Such stewardship goes beyond the current educational system.”
5.2.1 Bildung case-study – the EARTHwise Education for Sustainability (EFS) program

The following case-study illustrates how students can develop their transformative agency and stewardship capacities through ecological literacy projects that apply a Bildung approach of learning. The EARTHwise Education for Sustainability (EFS) program was developed and facilitated by Anneloes Smitsman for schools in Mauritius, and provided training to over 300 hundred teachers and 20,000 students over a period of 7 years, from 2011-2018. During this period the EFS program became implemented into the curriculum and educational systems of mainstream education in Mauritius, which was documented and evaluated through the PhD research by Anneloes Smitsman at the Maastricht Sustainability Institute, Maastricht University the Netherlands (Smitsman, 2019).

To implement the program, a group of teachers were selected from each of the schools to act as mentors and coordinators. These EFS mentors joined together for collective training sessions three times a year, which were facilitated by Anneloes Smitsman with guest contributors. During these EFS training sessions mentors received in-depth training or Bildung in their personal as well as professional development, which included training on: dialogue, experiential and transformative learning practices, meditation, consciousness, leadership and stewardship. Furthermore, they received training at their schools with students in: ecological sustainability, eco-systemic health, climate change mitigation and adaptation, biodiversity protection, eco-systemic governance, ecological food security, zero-waste principles, permaculture and regenerative design principles, social innovation, eco-social entrepreneurship, collective and intuitive intelligence, whole-self development, peace-building, healing and reconciliation, law and governance for thrivability, creativity and innovation, indigenous wisdom practices, and vision development.

This program has been fully implemented in 4 schools in Mauritius: Loreto College Curepipe primary and secondary (LCC), St Mary’s College Rose-Hill, and BPS Fatima College Goodlands. Many of the program principles have since become part of the mainstream educational transformation for the development of ecological literacies on the Island. The EFS program also included an Ecological Footprint project for the secondary schools, where students were asked to explore and collect data about water consumption and compare the price of bottled water in their region (local shops and supermarkets). The students then had to analyse their water consumption household bills to calculate their domestic water consumption and how much it costs at home.

Students were also asked to explore how they could reduce the consumption of water, and reduce their personal cost as well as the cost for the environment. Some schools implemented this as part of mathematics classes, whereas others implemented this as part of their science classes. The program was also implemented through human values and arts classes where students worked around the slogans such as “Water Unites” and zero-waste campaign to help their school become plastic-free and reduce their ecological footprint.

26 To read the stories from students and teachers visit – https://bit.ly/3m97hzb
27 The EFS ecological footprint projects are documented in this journal – https://bit.ly/2XD5kRD
28 EFS guest contributor Alex Mativo explains about “art for social change” from Kenya, and how he used art to raise awareness about the violence in his country – https://bit.ly/2VTyhIv
Through these activities and projects, students also learned about global citizenship and how ecological leadership is all about fair allocation and sharing of our planetary resources, with care for the future we share (Smitsman and Smitsman, 2020). Circles of care were formed to further develop their sense of stewardship and ecological agency. By learning how to care for nature at their school, they discovered how nature is a pattern that connects. Some schools also developed school gardens for growing food for the school community and surrounding communities. Students and teachers discovered how their own humanity grows in nature and brings us back to values, aspirations, and practices that unite and form the basis for co-creative a thriving world. Many similar examples can be provided, some of which feature in section 9.4 “links and resources.”

5.2.2 Learning and Healing through Ceremony and Rites of Passage

Transformative learning is a rite of passage through which we learn how to embrace and transform existing challenges, discover new perspectives, heal and let go, become more self-aware, develop our consciousness, awaken latent and new capacities, and grow into our future becoming. Our ecological and sustainability crisis can also be considered as a collective rite of passage through which we are challenged and called to evolve to new orders of reality that belong to the next stage of our evolutionary development. The required outer transformations will not manifest unless we first embrace and commit to the required inner transformations.

Furthermore, the destruction of our planet and the death of so many species and ecosystems are deeply saddening. We need to support people (and ourselves) in coming to terms with all these emotions, and especially our grief, anger, and anguish. Most importantly, we need to help children and teenagers with the range of emotions that they may be experiencing. Some may have lost a family member, or a pet, or someone close to them, even more so now with the COVID-19 pandemic and our worsening climate crisis. Others are learning about it through the news, on social media, and in conversations with their friends and family. Young people are often confronted with images and stories of death, loss, illnesses, violence, and suffering without preparation or a loving arm around them, which can shock the foundations of their
own sense of humanity. Many experience a sense of growing uncertainty, and some children and teenagers are feeling so terrified, scared, and hopeless that they take their own lives. Suicide rates are growing at an alarming rate around the world. In other words, the younger generations need our help to move through this challenging time, and especially to grieve together and know how they can safely share their feelings and thoughts. The loving support of a teacher or someone from their school they can trust in, can become a life-line during these difficult times.

Indigenous cultures have a long tradition of facilitating rites of passage rituals and ceremonies, through which the initiate is prepared by their community to acquire the skills, qualities, vision, courage, and trust in their unity with life and supportive guardians from the invisible worlds (Lawlor, 1991; Jacobs, 2016). When the community goes through shocks, death, or other challenging times, collective ceremonies are held to grieve and heal together, and prepare for the days to come.

However, in Western cultures many of these rituals are forgotten or have been reduced mainly to celebrate achievements and less to prepare people to grow through the challenges of life and build their character and personhood (Bildung). The following message by Nahu (Aztec) and Mexican American elder Anita Sanchez expresses well the importance of ritual and ceremony:

"Unfortunately, healing through ceremony in community is a foreign concept for most of today’s culture. Most of our modern-day, non-indigenous group ceremonies are centered around ball games, vacations, holidays, feasts, and celebrations with minimal intention or sacredness. We need intention; it is the intentional part of our ceremonies that harnesses energy and creates the possibility for healing and happiness. The healing power comes from a shared sense of the sacred. What I have witnessed time and time again is that healing almost always occurs in the company of others who are keenly focused on a sacred intention of care and support where healing is wanted. The members of this community call on their connection to each other and all their relations. They acknowledge spirit in their own cultural tradition; they may call on the elements of water, earth, air, fire, or light. They employ ritual and practice that speaks to them, such as a talking circle, dance, or meditation. The teachings of my Elders always show up in the most basic values of people’s life-giving relationships to each other. When people are relating to each other through goodwill, honesty, and caring, then the healing energy of the relationship naturally takes over and positive things happen."

~ Anita Sanchez (2017, p.113)

For those working in education or as learning facilitators, we thus recommend including rites of passage celebrations as part of learning for regeneration and thrivability. And not only for academic achievements or as a kind of endurance test. In particular rites of passage rituals and ceremonies that help people connect with the heart of their humanity and the allies of our natural world, including the trees, rivers, birds, insects, and the earth herself. Such rites of passage can also help young people understand more deeply what it means to grow up during a renaissance time, which offers many challenges as well as unprecedented opportunities for our personal and societal transformations and renewal.

Learning for regeneration and thrivability requires awareness and understanding of the dynamics of death, collapse, and dissolution, as well as conception, gestation, birth, emergence, and maturation. In other words, the cycles of life of which death can be considered a natural transition between states. It can help children (and adults too) when we explain death as a change in seasons and cycles. How death makes space for new life, when the leaves fall in autumn and the old flowers release their old forms when autumn arrives, so that nature can return its life force to the darkness within during winter times. Many children fear darkness, so it is important to explain how darkness is safe and comforting, like a womb. How life renews from the heart and womb of darkness to then emerge outwardly again when it is time for spring.

40 See https://cnb.cx/3gatitM and https://nbcnews.to/3AQ0AGk
By supporting people from an early age to recognise and engender these transformative forces within us, we will also become more equipped in working with these forces regeneratively when these manifest in our outer worlds. Furthermore, transition moments offer potent times for learning how to embrace and grow through uncertainty, conflict, death, grief, and anxiety. And in particular for learning how to tap into the inner resources of our psyches and the collective unconscious (Smitsman and Houston, 2021).

Schools and universities typically host ceremonies and rites of passage celebrations that focus on the educational achievements of the person. Such as those at the start and completion of a school or university year, special award ceremonies, competitions, induction rituals, PhD defence ceremonies, and many more. These ceremonies play a vital role in educational life, yet may not sufficiently prepare people for the types of transition capacities that we are now required to develop. In particular for developing our emotional, relational, and spiritual awareness and maturity for this time. Rites of passage ceremonies and rituals for regeneration and thrivability emphasize our whole self development of personhood and community (Bildung), and not merely our intellectual achievements.

If you are an educator or learning facilitator, consider how you can apply what you have read and learned so far to develop a rite of passage ritual or ceremony for yourself and the people you are supporting. You can also invite them to create their own ritual or rite of passage ceremony, which can then be celebrated together in community. As part of this process, we offer the following questions to support a deeper inquiry and reflection for your role as facilitator of such a process:

- What does it mean to you to grow more fully into your humanity?
- How do you see the future development of the human species?
- Do you believe it is possible for us to co-create a thrivable world together, and to become the future ancestors of regenerative civilizations who live in harmony with the Earth?
- What are the qualities, capacities, and characters of such future humans?
- How can the education you provide, support people to become more ecologically conscious and prepare them for this renaissance time of major change?
- What kind of humans are we required to become for a regenerative and thrivable world?

In indigenous and traditional cultures, rites of passage also serve to develop and mature our powers and responsibilities as stewards for our commons. Rituals also play a major role in gnostic traditions, such as freemasonry and hermetics, where rituals serve to prepare a person into becoming a wise, responsible, and caring member of society and their communities. Explore how each of these traditions can support the redesign of rituals and ceremonies in education that have lost their deeper sense of meaning. Furthermore, explore what new elements, or new ceremonies and rituals, can be designed for becoming the future humans of a new kind of civilization that is regenerative and thrivable?

As a starting point, one may consider revisiting existing rituals and ceremonies that already form part of mainstream education and academia. Such as, the Hippocratic oath that medical doctors take to complete their degree, the ways a PhD candidate is challenged during their final defence ceremony. How can such and similar rituals evolve for this time and the kind of consciousness that we seek to develop and support?

We recommend applying the 7 Learning Perspectives for the design and redesign of such rites of passage rituals and ceremonies. Below are a few examples that illustrate how this can be applied:
1. **The necessity for transformation** – Apply Learning as Context and the 3 context principles: The Anthropocene, the Noosphere, and a New Renaissance.

2. **The lure of our future becoming** – Apply the perspectives of Learning as Life and Learning as Future, and contextualize this through practices for Learning as Story.

3. **The catalyst for transformation** – Apply the imaginal process from Learning as Future and the exercise of section 7.3.2 from Learning as Story, linked with the explorations of Learning as Community.

4. **The death of the old ways** – Apply section 5.1 from Learning as Agency and section 7.2 Learning as Story.

5. **The transition to the new ways** – Apply Learning as Agency and the full exploration of this Blueprint for developing the new capacities, competencies, understanding, and awareness of the new ways.

6. **Celebration of the transformations** – Apply this section from Learning as Agency combined with Learning as Connection in order to create meaningful feedback and acknowledgements. For entering into the new story, apply section 7.3 of Learning as Story, as well as the final chapter Learning as Community.

7. **Embody and embed the new capacities and consciousness** – Apply the recommendations of this Blueprint of section 9.2 and become the embodiment for the world we seek to live in.

### 5.3 GOVERNANCE AND SOVEREIGNTY OF AGENCY

As a final component for this chapter Learning as Agency, we will briefly explore the governance of agency in the context of learning for regeneration and thrivability. Governance relates to the ways that power and decision rights are distributed in a system, as well as how we can apply, coordinate, and direct our capacities and resources within the systems we form part of. Accordingly, a key component of governance is self-governance of agency. The self-governance of our agency has an inner dimension and an outer application. Namely, how we govern, balance, and coordinate our inner dynamics, needs, desires, and behaviours, as well as the outer expression of our agency in terms of how we apply ourselves in society and in particular our participation in the governance of the systems, organizations, and cultures we form part.

In our view, it is essential that younger generations learn from an early age about all the various aspects of governance of agency, and in particular the governance of agency for regeneration and thrivability. This starts by learning about themselves as a natural living system, as we explained through the 13 qualities of life in section 3.1, and further on in this section.

Sovereignty of agency contains a political and economic dimension that is to be understood within the larger historical contexts of the formation of nation-states and the development of universal human rights (Smitsman, 2019). Traditionally, sovereignty meant to have supreme authority within a territory. Accordingly, the state became the political institution in which sovereignty was embodied. Sovereignty of states and later nation-states attributed the supreme authority over people’s life to a central overarching entity, which merely followed an earlier trend whereby this type of sovereignty was self-proclaimed by religious institutions, monarchies, dictators, and other elites who deemed themselves supreme or sovereign over the lives of others. This is in stark contrast to indigenous models of governance, where sovereignty is based on principles of interdependence and interrelatedness, and the sovereignty of life in accordance with universal principles or sacred laws of nature.

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42 [https://plato.stanford.edu/entries/sovereignty/](https://plato.stanford.edu/entries/sovereignty/)

43 See the 16 Indigenous Guiding Principles for Co-Creating a Sustainable, Harmonious, Prosperous World – [https://www.fwi.net/profiles/blogs/sixteen-guiding-principles-for](https://www.fwi.net/profiles/blogs/sixteen-guiding-principles-for)
Most of humanity’s non-indigenous governance models are built on the assumption that governance needs to regulate and coordinate the activities of separate, rather than interdependent, agents or functions of agency. Moreover, the sovereignty of agency in most Western models of governance is directly related to the notion of being sovereign in the pursuit of one’s individual rights and freedoms as protected by the constitution of one’s citizenship. We will briefly explore now how the Earth Charter can serve as a valuable educational resource for learning about earth-based governance of interdependence.

5.3.1 The Earth Charter and the governance of interdependence

The Earth Charter was launched in 2000 after many years of consultations and inputs from people and organizations around the world to turn “conscience into action.” The Charter sought to balance these notions of independent universal rights by introducing the concept of interdependence and emphasizing that with rights come responsibilities: “It seeks to inspire in all people a new sense of global interdependence and shared responsibility for the well-being of the whole human family, the greater community of life, and future generations. It is a vision of hope and a call to action.”

Moreover, the Earth Charter brought our planet to the centre of our governance of human agency through sixteen principles for; “powering a global movement towards a more just, sustainable and peaceful world.” The Earth Charter has since been adopted as a vital framework for education by many educational institutions around the world. The first principle, “the interdependence of all life”, is followed by the second principle, “love and responsibility”:

“Respect Earth and life in all its diversity. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.”

~ The Earth Charter, first principle.

Unfortunately, the Earth Charter was never adopted formally by the United Nations and hence its coordinating power is limited to those who choose to voluntarily adopt the vital guidance it offers. We highly recommend using this Charter for educational purposes, and in particular to explore the principles of governance for regeneration and thrivability. The Earth Charter Education Center offers many valuable online education programs that focus on how to incorporate values and principles for sustainability and regeneration, in learning and decision-making processes.

5.3.2 Autopoiesis and the governance of agency for regeneration and thrivability

In chapter 3, we explored three evolutionary principles of life, the essence of which also feature in the Earth Charter that guides the actions required to honour these evolutionary principles. The three evolutionary principles emphasize how life is an interdependent and unified reality, from a cosmological as well as an ecological perspective. As mentioned earlier, the governance of agency for an interdependent world is radically different from that of a world presumed to be formed by independent and separate agents who can act freely on the web life without consequence. Our current climate emergency reveals clearly that our interdependence with all of life cannot be ignored.

44 The Earth Charter – https://earthcharter.org/read-the-earth-charter/
46 The Earth Charter Education Center – https://earthcharter.org/education-sustainable-development/
To not include governance for interdependence in the design and governance of our societies, and in particular our economies, is setting up the way for acts of ecocide.\textsuperscript{47} Ecocide, according to the recent (June 2021) legally accepted definition means: “unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.”\textsuperscript{48} Humanity’s impacts have been so damaging for our planet and our lives, precisely because we have ignored how we each form part of an interdependent and interrelated world and universe. Herewith again the third evolutionary principle of section 3.1, to explain how:

\textbf{Principle 3:} The universe learns and develops its evolutionary capacities by actualizing its cosmological potentials through systemic autonomy and autopoiesis – i.e. self-creation, self-regulation, and adaptation.

- This evolutionary principle helps us understand the systemic conditions for learning and development as well as how we grow, expand and evolve as a self-actualizing process of consciousness.

Through this section we will unpack this concept of autopoiesis further as it relates directly to the governance of agency for regeneration and thrivability. Autopoiesis is a complex term that can be difficult for people to understand. Autopoiesis is Greek for what can be loosely translated to mean “self-creation”. This term was first introduced by Maturana and Varela in 1980, and was later developed in general systems theory to explain how a living system is a self-organizing system that can sustain itself through a network of reactions that regenerate its components within a self-generated boundary (Maturana, 2002; Smitsman 2019).

The regeneration of a living system can take place through the self-reproduction of its own elements or parts, and of the network of interactions that characterize and create an environment conducive for its thrivability. Living systems show intrinsic self-motivated autopoietic activity, and can sense the degrees of freedom that are available to act and behave. Autopoiesis creates the basis for our experience and governance of autonomy and sovereignty, as interdependent with life as a whole. In other words, when we decouple our sense of sovereignty from our natural world by causing impacts that harm the self-regulating capacities of our planet, we also undermine the foundations for our own autonomy and sovereignty. Our human lives depend on the health of our planet. All living systems are autopoietic systems; if we harm these vital autopoietic functions of self-creation, self-regulation, and adaptation, we undermine and harm the foundation for regeneration and thrivability, as well as sustainability.

The principles of autopoiesis clearly reveal how autonomy and sovereignty doesn’t mean self-determination through disconnection or separation from our embeddedness within life. Autonomy and sovereignty, from an autopoietic or living systems perspective, means being able to act on one’s innate capacities for self-creation, self-regulation, and adaptation. When this is no longer possible or restricted, one’s capacity for autonomy and sovereignty becomes reduced.

Autopoiesis also reveals how autonomy and sovereignty are self-regulated by essential systemic boundaries between an organism and its environment, which is not a division or barrier. A systemic boundary acts like a living membrane that filters the information flows and exchanges. Systemic boundaries of living systems are self-generated (and not centrally imposed) and manifest outwardly from the informational architecture of the living system inwardly (Smitsman, 2019). Moreover, we are always exchanging with our environments, even when unconscious of this.

\textsuperscript{47} To read the legal definition of ecocide visit – https://www.stopecocide.earth/

Furthermore, recent research on epigenetic and biomic health reveal how our human bodies consist only for a very minor part of human genetic materials. We form part of large networks of bacteria and viruses who have learned to cooperate and co-create to form living systems, including our human bodies (Pelle-tier, 2019). As well, quantum physics and informational sciences reveal how we form an intimate part of a universe of information that is both nonlocally entangled and interconnected, as well as locally regulated and adaptive (Smitsman and Currivan, 2019). When an organism or living system can no longer perform its innate functions of self-creation, self-regulation, and adaptation, the onset of disease and collapse are set in motion.

Accordingly, autopoietic sovereignty also serves as a key condition for learning and development (more about this in the next chapter). Or more precisely, learning and development are possible as long as these autopoietic functions of self-creation, self-regulation, and adaptation are freely accessible for sensing, attuning, and adjusting our stances, behaviours, and interactions (Smitsman and Smitsman, 2020) within the environment we form part of. If learning takes place in mechanistic educational systems that harm or undermine these vital autopoietic activities, learning and development too becomes stifled, discouraged, and restricted. In other words, if you are an educator or learning facilitator or providing education to others, please ensure that your educational environment, processes, and systems align with the governance of agency for regeneration and thrivability, as per these autopoietic functions: self-creation, self-regulation, and adaptation. We offer the following guidelines below as a check-list:

1. Respect and support people in their self-governance of agency so they can learn how to regulate and adapt their capacities, engagement, and relationships (inwardly and outwardly) for the learning tasks at hand, and in ways that are safe, healthy, meaningful, and thrivable.
2. Support people to become (more) conscious of their capacities for regenerative self-governance by helping them become aware of their innate abilities of self-creation, self-regulation, and adaptation through interdependent networks of relationships with each other and our natural world.
3. Apply living system governance principles in the design and governance of educational systems and for creating learning ecosystems that support learners to develop an embodied understanding of their unity with life, with appreciation and care for each other, life, and our planet.

Finally, we offer a couple of brief illustrations of what happens when governance and sovereignty for regeneration and thrivability becomes severely constrained. This example can also be provided when explaining these complex concepts to people. When a person is trapped in addiction, their behaviours become increasingly destructive towards themselves and others. We could even use this analogy to reveal the extent to which humanity itself is trapped in addictive consumptive patterns that become incredibly destructive towards ourselves and other species.

When we are caught in addiction our innate autopoietic capacities for self-creation, self-regulation, and adaptation, become severely constrained. This can even lead to a loss of autonomy and sovereignty, when the person can no longer make an informed and conscious decision and is not able to stop their self-destruction. When addictions control our behaviours and needs, we have reduced agency for regeneration and thrivability. If education does not adequately prepare people to develop their autopoietic capacities for (self)governance for regeneration and thrivability, education will make people more vulnerable to entrapment, abuse, and addictions.

Furthermore, when education becomes authoritative and prescriptive, students are not able to explore, discover, and learn experientially. Learning for regeneration and thrivability requires that people become aware of the systemic dynamics within and around, including how a system can support (affordances) or hinder (limit) their degrees of freedom. When students are hindered in their autonomy and
sovereignty, it breeds a culture of distrust and fear, and discourages them to develop their capacities for regeneration and thrivability. Without a sense of inner freedom we cannot thrive and it becomes very difficult to be creative and act regeneratively.

In other words, the criteria of autonomy and autopoiesis, as clarified in the third evolutionary principle, now serves as a vital “litmus test” for the governance of our agency for regeneration and thrivability.

Another example can be drawn from a companion r3.0 Blueprint, on *Funding Governance for Systemic Transformation*. The central thesis of this Blueprint holds that humanity’s funding ecosystem, and the ecosystem of (primarily) nongovernmental organizations (NGOs) that it funds, actually undermines healthy (i.e. autopoietic self-creative, self-regulative, and adaptative) governance.

In a nutshell, the lion’s share of financial capital that goes into funded activities (see it as an ‘industry’ in itself) derives from extractive monocapitalist models (philanthropic funds are simply surplus capital stocks seeking tax-deductible flows). These models cannot deliver on real transformation, and keep us stuck in incremental change that essentially leaves the status quo intact.

### 5.4 SUMMARY

**Learning as Agency**

Through *Learning as Agency* we explored three perspectives:

1. Transformative Agency.
2. Bildung and Stewardship.
3. The Governance of Agency.

*Learning as Agency* through these three perspectives serves to guide the development of personal and collective stewardship capacities for regeneration and thrivability. This includes strategies and processes for how to embrace the growing pains and evolutionary tensions of transition times, including rites of passage, and how to transform dualistic barriers through third way evolutionary approaches. Moreover, the *Learning as Agency* perspectives also serve as conditions for learning how to work with complexity, and for developing a governance of agency for regeneration and thrivability based on interdependence and autopoietic principles.

- The *Learning as Agency* perspectives provide the necessary foundations for developing our agency capacities for stewarding regeneration and thrivability.
The Sea Voyage Journal – Learning as Connection

“In our Singaporian school systems, schools are obsessed with measurement and testing. This breeds so much anxiety at a young age, a hidden curriculum of competition and scarcity. It is so prescriptive and limits curiosity and imagination.” Julian exclaimed as we started our exploration.

“And not just in Asia, this problem is wide-spread, and perhaps even worse in developing countries where people believe that competitive education gains them better chances for a life overseas.” Anneloes pitched in.

“How to change the mindsets of educators to move away from containers and standard molds?” Luis asked concerned.

“If we don’t watch out, we’ll get a mold for educational transformation as well,” Shweta giggled. “It again comes down to the economic system, which imposes these rigid constraints on education.”

“This breeds competition and not collaboration.” Ralph pitched in.

Perhaps we can take some lessons from the prosocial schools and their core design principles for scaling collaboration,” Michael suggested.

“We have created a connected world of metrics, instead of a connected world of meaning and being. So much of education today is about knowing the world instead of being in it.” Howard added.

Robert nodded his head, “Measurements are just focussed on digital and quantitative testing, we really need to move beyond just measurements. For example, by including community-based accreditation.”

The mavericks each shared their frustration with the standardization of education and the way that both learner and educators have become trapped in a metric-based system in a digitally connected world, which ironically takes away from learning as connection. All agreed that metrics alone don’t give empowering feedback for the learners.

“Let’s shift our focus for a moment.” Anneloes offered. “Look around. All of life is interconnected. Nature learns connectively. We are sailing over valleys and mountains covered by the great Atlantic ocean, with myriads of fish and all kinds of sea life that we can’t even see. Yet all of this has emerged from a universe that is essentially also digital at the implicate orders of reality – a cosmic hologram composed of non-local digits that form the fractal growth patterns of life. Why are digits in living systems connective and ours not? What are we missing in our digital technologies? How can we apply these connective patterns in our human technologies?”

“Perhaps because the digits we use in human systems are used to measure and quantity things, rather than qualify. Nature doesn’t quantify, measure, or compute.” Bas replied.
This chapter explores the transformative perspectives of “Learning as Connection”. The three-fold structure of this chapter is:

- Learning as a Connective Pattern.
- Digital connections and the role of AI and VR.

6.1 LEARNING AS A CONNECTIVE PATTERN

“My father was writing a letter to a colleague when he wrote the phrase, “Break the pattern that connects and you necessarily destroy all unity.” This became what is now a well-known quote from the introduction to his book, Mind and Nature: “What is the pattern that connects the crab to the lobster, the orchid to the primrose, and all the four of them to you and you to me?” That question alone is grounds for an entire education. It calls for the formal details of living ecosystems to be seen in the larger context of pattern. It requires the differences to be described through specific study in order to examine the minutiae and the structures of living things, while simultaneously it pulls into focus a larger vision of the patterns and rhythms of life. How do the many details learn? How do they interact? How are they organized? Or rather, ‘how are they self-organizing?’ since the adjusting is incessant.”

~ Nora Bateson, 2016.
Learning is a connective pattern, as described here by Gregory and Nora Bateson. Through Learning as Life and the Noosphere as context (section 2.2), we also explored how learning unfolds as and from a unified field of consciousness. This unified field generates connective patterns for the emergence and evolution of life. Accordingly, we can also say that life is a connective pattern.

The question to us as humans is: how can we honour these connective patterns in the way we design, facilitate, and evaluate education? Unfortunately, many children learn from an early age to break the patterns that connect us to the larger ecologies of life. For example, many children have no idea where the milk they drink on a daily basis comes from. Furthermore, many have never been on a farm or touched a cow, sheep, or goat and formed a personal relationship with the animals that serve as their food supplies.

Research of ecological psychologists reveal how learning and development of young infants is complex and nonlinear (see Gibson and Pick, 2000; Fogel, 1993; Smitsman and Smitsman, 2020; Thelen and Smith 1994; von Hofsten, 2007). Infants start developing their skills without formal instruction, by exploring and applying their sensory capacities and generating their own feedback for learning. From birth onwards, children are natural learners. If education does not foster and enhance our innate learning potentials, there is something wrong with the ways we have conceived and designed education.

Learning as a Connective Pattern provides a systemic focus for reducing and removing (as much as possible) the artificial silos and factions that we have imposed on the many processes of learning and development. For example, we can explore: what is the pattern that connects a young girl who is learning to read somewhere in Africa, to her village, to the mobile phone of her parents, to the people who come to collect minerals from their nearby mines, to you reading this Blueprint and to the future of education, and our living planet? Explore how far, wide, and deeply you can build on this pattern to connect the dots that reveal the complex interdependencies of our lives with life as a whole.

Exploring how the connective patterns of life relate to ourselves, our relationships, nature, and the worlds we form part of, can also help us heal the sense of isolation and fragmentation that so many people suffer from. Becoming aware of phenomena and events as patterns can also help to shift patterns of blame and polarization that seek to divide. This deeper systemic understanding of causation and emergence is at the heart of what a living system’s based education seeks to foster (see Jacobos, 2016; Smitsman et al., 2020; Sterling, 2002; Wahl, 2016).
6.2 DIGITAL CONNECTIONS AND THE ROLE OF AI AND VR

Through this section we will explore how and to which extent digital technologies can support transformative learning and educational transformation. The recent COVID-19 pandemic has significantly increased the uptake of digital learning technologies around the world. Yet, this crisis has also revealed many challenges and significant gaps and inequalities. Many schools and universities from around the world had to shut down their physical learning facilities in early 2020, without the financial and technological means to prepare for transitioning to distant learning modes. Especially in countries of the Global South, the impacts of this pandemic are long and far reaching.49

The inequality of access to digital devices and internet services coupled with lack of digital skills, has meant that many children and youth around the world have not been able to continue their education, for some now more than one year. Current research by Avenesian et al. (2021, p.1) suggests that “more than 30% of schoolchildren globally cannot be reached by remote learning policies due to the high variation in access to assets for remote learning that exists within and between the world regions.” The inequality and opportunity gaps between the richer and poorer nations have grown even more starkly during this whole crisis. Especially the children and youth from rural communities and poorer households are at greatest risk of being left behind.

Even though access to quality education is considered a basic human right, the realization of this right in times of crisis requires whole new approaches and further resources. Digital technologies for remote learning can play a positive role if carefully and equally applied, and if applied in ways that do not impair children with physical needs. Especially for younger children, remote learning cannot replace the physical educational support they require. This raises another challenge of digital learning, and that is the modus of connection, which to many people feels distant.

While the world had to adapt to new forms of connection, the rates of suicides, depression, and mental problems have increased significantly from the onset of the Pandemic. Although it may appear as if our human world has never become more connected, from a psycho-social perspective it is to be noted how increasingly more people feel isolated and alone. Lost in technologies that do not provide the warmth and connectivity of human contact, and scared of technologies that many do not understand and yet bring significant consequences to their lives.

Our human societies increasingly require that people shift over to digitally facilitated connections, which many do not understand, and for which new forms of meaning and sense-making will need to be developed (Introna, 2017). Furthermore, in absence of visual and physical feedback, it can be difficult for people to sense or understand how they are being received and understood by others. Digital technologies for social usage come with a real risk of trivializing and distancing relationships. This trivialization is characterized, among other facts, by being “kept barren of real consequences” (Dreyfus, 1999, 2001). Also, when the reciprocal basis of digital relationships becomes “economized” this further increases the risk of moral disengagement from social life (see Bandura 1991, Willard, 1998). Willard (1998) further states that, “Technology can act to dehumanize others because of the lack of affective or tangible feedback.”

49 See also https://en.unesco.org/news/startling-digital-divides-distance-learning-emerge
Furthermore, our sense of community is greatly enhanced by sharing and creating common physical experiences that are meaningful and supportive, which cannot be surrogated by digitally facilitated connections. However, by better understanding how communities thrive and flourish, this can be digitally assisted and supported. Accordingly, digital technologies can serve community-based learning, as is the example with SEEDS and Hypha where hundreds of people meet online to work on common projects, funded through regenerative digital currencies like Seeds, and co-working through decentralized digital governance systems called DHOs.  

By being aware of potential adverse effects as well as advantages of digitally facilitated connections for collaborative learning and co-working, education can and must play a key enabling role for developing digital literacies during this time of rapid change.  

Education for digital competencies should enable:

1. **Awareness** of the potentially positive and negative sides of digital technologies, including AI and VR learning modes.
2. **Development** of digital literacies of children from an early age, by getting them familiarized with many of the existing and new digital technologies that form part of the demands and opportunities of our digitizing worlds.
3. **Exploration** for how digital learning modalities and digitally facilitated evaluation can create new empowering learning experiences, and better feedback for the various learning and developmental needs of diverse groups of students.
4. **Collaboration** between educational initiatives and institutions from around the world to more effectively reduce the economic, social, technical, and competency gaps between people and countries.

Going back to the example of the little girl in a village in Africa. The uptake of mobile phones and internet facilities in Africa has been enormous. This has also drastically altered people’s expectations of life and the way they are learning about other cultures, worlds, and possibilities. We will complete this section with a brief exploration of artificial intelligence (AI) and virtual reality (VR) technologies in education. Working group member Jennifer Browdy asked, “How do we cultivate resilience in order to thrive in the digital landscape? How can education, which so often takes place in enclosed structures in cities, or on flat screens, foster a dynamic relationship with our natural world?”

In their review of AI applications in education Zhang and Aslan (2021, p.9) noted how, “AI technologies have great potentials in education, in particular, to increase access to learning opportunities, to scale up personally customized learning experiences, and to optimize methods and strategies for desired learning outcomes.” AI and VR applications in education will only increase, and hence we highly recommend educators to get acquainted with these developments, so they can guide their students appropriately. Working group member Alexander Laszlo further noted how, “Smart Data, IoT, deep AI, VR, AR, AE (artificial emotion) are making great strides and have serious implications for societal development in harmony with the rest of life and living relationships. Of these, augmented reality (AR) may hold the greatest potential for impacting learning contexts.”

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50 For more information about SEEDS, visit – https://joinseeds.earth/. For more information about Hypha and DHOs, visit https://hypha.earth/.
51 Working group member Kurt Barnes mentioned how in the Africa region much is being achieved with digital learning programs for young through their mobile phones in areas like sex education, and psychogical first aid, which also features in certain USA based education programmes for training practitioners or volunteers in the frontlines of “Psy 1st aid”.
This also raises an interesting opportunity, namely how to purposefully design digitally facilitated experiences of an interconnected world. Imagine entering into a Universe experience that actually helps people to sensory experience the three evolutionary principles of life that we explored earlier in chapter 3. Many biology videos about the human body show children through animated movies what happens inside the human body. Imagine, now actually guiding students inside a VR and AE facilitated learning environment, in which the decisions they are asked to make at critical points can shift the entire system they are exploring.

There are indeed many fascinating opportunities that could greatly enhance people’s understanding and appreciation of life and nature. Yet, these new developments also require very careful design processes through life-centric systemic thinking. These new developments in educational technologies also require the development of a new kind of ethics that can help us discern the choices, risks, and opportunities, free from interferences of economic market interests.

Finally, we like to offer a brief exploration of the gamification of learning and the opportunities this can afford. Working group member Kurt Barnes mentioned: “Having worked in the fields of education for many decades it is my experience that teachers need to become literate about IT and other digital technologies, and in particular the gamification of education for greater learning engagement. VR is already being used by medical schools around the world for training students to perform the most complex surgeries and treat rare diseases, similar also in Aviation schools for pilot training. Application to other fields of learning can greatly benefit from these new learning technologies. Furthermore, teachers should learn how to create their own practical teaching games in the same manner that one makes a powerpoint presentation.”

Working group member Remko Van Der Pluijm added to this how: “AI, VE, and AE can also be applied the form of feedback loops in classrooms in order to create immersion into a topic, especially to immerse in certain historical events52 and to experience these situations. Truly being able to experience certain natural phenomena (akin to IMAX movies and their VR-relatives) might also help to foster empathy with students.”

On a cautionary note, we do want to emphasize how the rise of artificial intelligence, and new forms of data imperialism, can also pose many known and unknown dangers. AI facilitated algorithms are creating and processing data in ways that human brains can’t. Here are some essential questions to raise:

- How do we process the feedback and data that so many of these AI programs provide us?
- Who is controlling what we see, how long we see what we see, and what we will conclude from what we are exposed to?
- What data are we providing and to whom, and what influence are we allowing in educational environments by AI enhanced programs, in a world where data is becoming the new gold to mine for?

Historian and philosopher Yuval Noah Harari warns how AI algorithms make decisions in fundamentally different ways than humans (Harari, 2021). Learning happens by processing data or information in a variety of ways, and this involves decision making from the most subtle to the deeper systemic. If data processing and decision making is increasingly allocated to algorithmic programs, then are we in some ways devolving or reducing our learning capacities?

52 For example, see – https://stadsarchief.rotterdam.nl/over-ons/projecten/rotterdam-3d/index.xml
A decision that we make ourselves, through conscious deliberation and reflection, carries a very different impact compared to decisions that we follow or are made by others. What is the invisible ‘other’ that we are in the process of co-creating through rapidly developing digital technologies? This digital ‘other’ is incapable of the kind of understanding that we attribute to consciousness. As mentioned by physicist Sir Roger Penrose, artificial intelligence is in fact a form of “artificial smartness”, which is not the same as intelligence. He also states that consciousness is not merely computational or algorithmic and has to do with understanding, which is precisely what is lacking in AI (Penrose, 2020).

6.3 LEARNING FEEDBACK – REWARDS, TESTS, EVALUATION, TOKENIZATION

Learning and development is fundamentally a process that creates as well as requires feedback. Without appropriate feedback, living systems cannot evolve or learn. Even artificial systems, such as AI based programs, require data inputs and feedback in order to learn.

During the Ph.D. case-study research of the lead author Anneloes Smitsman, one of the main barriers that was identified for educational transformation had to do with standardized tests and examinations. Her case-study included three secondary schools in Mauritius, who participated in the EARTHwise Education for Sustainability program, developed by Smitsman and implemented into mainstream education over a period of 7 years (see section 5.2.1). During an in-depth evaluation with the teachers who served as mentors for this program, 92% identified how learning for standard exams was prioritized as more important at their school than learning for sustainability, and how this formed a major barrier for transformative learning. Each of these three schools had to abide by Cambridge examinations, which became the dominant factor for learning evaluation and feedback. It was only by implementing new feedback and evaluation methods at the lower forms (those not confined by standardized tests) that this barrier became slightly reduced.53

The case-study of schools in Mauritius are not unique; similar trends can be found around the world in countries where rigid national educational policies dictate what students need to learn and how learning outcomes are assessed and rewarded for both students and teachers. Similar barriers can also be observed in organizational learning, where standardized evaluations and goal-oriented reward schemes create a culture of result-based learning that hinders the development of essential transformative capacities that are process oriented.

Accordingly, we strongly recommend reviewing and adjusting the learning feedback mechanisms of current evaluations, assessments, tests, exams, remunerations, and appraisals. In particular to assess whether these mechanisms provide the appropriate feedback for developing capacities and understanding for regeneration and thrivability. Furthermore, many standardized and result-oriented types of assessments and accreditations have created cultures that inhibit the development of personal, collective, and organizational transformative capacities. Especially, where assessment relies heavily on preconceived and predefined learning outcomes that only value or reward what is expected.

For those working in education, we strongly recommend implementing the 7 Learning Perspectives in learning evaluations and assessments. Working group member Bas van den Berge further suggested that quantitative forms of standardized testing often miss capturing the more qualitative aspects of learning and development, which also tend to be more subjective. We, therefore, recommend to design evaluations and assessments in ways that are inclusive and supportive for varying forms of learning and development – including embodied, experiential, imaginal, cognitive, intuitive, and sensory. Furthermore, we recommend inclusion of dynamic feedback over time, rather than singular tests and evaluations in snapshot-moment, as is often the case in standardized testing.

53 For more information see chapter 3 and 4 of Smitsman, 2019 in the reference section.
Educational transformation also requires a major revisioning and redesign of the role of examining bodies and accreditation agencies, to shift away from control and management of learning outcomes, and move towards the facilitation and nurturing of learning via experimentation, play, and experiential risk taking.

This analysis of the shortcomings of current evaluation and incentivization systems aligns with analyses in other r3.0 Blueprints, most prominently the Value Cycles Blueprint. It critiques the evaluation modality exemplified by the Impact Valuation framework, which "evaluates" impacts through "valuation," or placing a monetary "pricetag" on impacts that then allows for a kind of "marketplace" of impact assessment. Unfortunately, this mechanistic approach defies the physics and principles of holism, whereby impacts on vital capital resources are not "fungible" and thus cannot be offset or traded like commodities on an exchange: i.e. a positive impact on gender diversity cannot undo negative impacts on water quality.

As well, the Value Cycles Blueprint asserts the need for “true” incentivization that likewise takes a holistic approach, linking compensation and remuneration directly to respect for the carrying capacities of capitals that are vital to support wellbeing. This approach is a clear analog for education, where incentivization must not be divorced from holistic realities (as standardized testing does). Instead, education must incentivize understanding and respect for the holistic, interconnected nature of complex adaptive living systems.

6.3.1 Tokenization, SEEDS as case-study

To conclude this chapter, we offer the following case-study by SEEDS to explore how tokenization through digital currencies and gratitude tokens for regenerative education can scale and accelerate the necessary engagement for our societal transformation. “SEEDS” is an acronym that stands for, Sowing Ecological, Equitable and Decentralizing Societies – a movement of movements serving the Regenerative Renaissance by providing support, systems, and tools for a thrivable world. “Seeds” is the name given to the utility tokens used within the SEEDS ecosystem.

SEEDS is an open-source decentralized financial ecosystem and governance platform, owned and governed by the citizens who use it, to empower humanity and heal our planet. SEEDS supports the myriad of change-maker movements by providing tools and finance through its digital regenerative currency called ‘Seeds,’ for harnessing the power of wealth creation and scaling global coordination of the Regenerative Renaissance Movement. SEEDS grew from $2,7 Million USD in January 2020 to over $41 million USD as of March 2021. SEEDS is just getting started and is positioned to provide the necessary finance and systemic support that the transition to regenerative and thriving civilisations needs.

Seeds tokens are used to reserve bandwidth for transactions on the blockchain that underpins SEEDS (the network), and to access SEEDS services and features. SEEDS also allocates gratitude tokens to its members and accordingly tokenizes the behaviour of sharing gratitude as an active expression of appreciation, which is acknowledged as adding system value.

SEEDS architecture of systems, tools, and governance processes are based on leading edge protocols, tools, and systems for decentralizing economics and governance, inspired by the self-organizing holonic architecture of life. The three evolutionary principles of life that are mentioned in chapter 3 section 3.1 of this Blueprint are explicitly incorporated in Article 3 of the SEEDS Constitution, for which Anneloes Smitsman served as an architect. These evolutionary principles are further implemented in Article 6 of

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55 SEEDS website – https://joinseeds.earth/
the SEEDS Constitution, which lists 13 architecture protocols to provide guidance for the development and evolution of the SEEDS design, code, tools, systems, education, and governance:

2. Enable and Encourage Choice – Citizen Governed.
3. Include Spaces to Dream – Architect from the Future.
5. Increase Carrying Capacities – Improve Systemic Resiliency and Health.
7. Communicate Inclusively – Create Resonance and Alignment.
9. Collaborate for Thrivability – With the Patterns that Connect.
11. Design in Fractals – Scale Holistically.
12. Enhance Fertility – Create Abundance Regeneratively.
13. To be Created ... – Open Space to Dream into Together.

Through the SEEDS Constitution, the founding principles for SEEDS to become an evolutionary learning ecosystem are also embedded, and rewarded through the SEEDS tokenization mechanisms. Accordingly, SEEDS goes well beyond a regenerative financial system in terms of ‘just being money.’ It also provides architecture, tools, education, and systems for rethinking and redesigning our societal models and systems. Rather than utilising the market as the primary distributor of collective wealth, SEEDS aims to consciously program into economic systems what people collectively determine as contributions to the wellbeing of our civilizations.

For example, if protecting ancient rainforests is seen as important, that behaviour can be rewarded within the SEEDS ecosystem. Furthermore, if local organic food is considered important, it can be subsidized through the SEEDS financial incentives and resources. Possibilities are endless when people are provided the capabilities to consciously program how we want our economic systems to serve us. This is what is at the heart of the Regenerative Renaissance movement for creating the economies of life, as part of the architecture and design for thrivable civilisations.

The governance system of SEEDS and its HYPHA DHO platform also serve as illustrative examples of holarchic self-organizing and decentralised systems. Similar decentralized modes of organisation are emerging throughout the Regenerative Economics movement and related initiatives, which foster very different learning capacities compared to standardized education. Holarchy is a fundamental quality of the architecture of living systems.\(^{57}\) Holarchic organization is a natural and an innate organizing principle

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\(^{56}\) Part 1 of the SEEDS Constitution has been designed by Anneloes Smitsman, with extensive community input, based on her Thrivability Compass design. The Constitution embeds the three evolutionary principles of life and the architecture for the five stages of transformation, as well as many of the key elements of the 7 Learning Perspectives that feature in this Blueprint. The SEEDS Constitution was accepted by unanimity quorum on 10 July 2021 by the SEEDS citizens.
of the universe itself. Living systems do not impose organizational structures, like many of our human systems do, nor are their organizational dynamics artificially controlled. Instead, the organizational structures and dynamics of living systems emerge from nonlocal fractal potentials that become localized within the evolving structures of their systems, and the systems they form part of (see also chapter 3 of this Blueprint).

If we are to create regenerative economies for thrivability through transformative education, it is essential that we start to embed these living system principles in the design and governance of our educational, governance, and economic systems (see also section 5.3 on “Governance and Sovereignty of Agency”).

6.4 SUMMARY

Learning as Connection Perspectives

We explored the following three perspectives:

1. Learning as a Connective Pattern.
2. Digital connections and the role of AI and VR.

Learning as Connection through these three perspectives serves as an essential inquiry into the future trends of education, including the role of digital technologies and tokenization. It also provides a deeper inquiry into the role of assessments and evaluation, and how to create meaningful feedback for the ecology of learning as a whole. The Learning as Connection perspectives provide essential inquiries for developing our digital literacies, connective capacities, and regenerative feedback systems for creating thrivable learning systems, technologies and tokenization. It also provides a deeper inquiry into the role of assessments and evaluation, and how to create meaningful feedback for the ecology of learning as a whole.

- The Learning as Connection perspectives provide essential inquiries for developing our digital literacies, connective capacities, and regenerative feedback systems for creating thrivable learning systems.

57 The term holarchy was coined by philosopher Arthur Koestler to describe how each whole thing within nature (a holon) is also part of a larger whole. Holarchy also describe behaviour that is partly a function of individual nature and partly a function of the nature of the embedding system, see Snitsman 2019 in the reference section.
7. LEARNING AS STORY

The Sea Voyage Journal – Learning as Story

“I much prefer to see education as an evolutionary story of collaborative learning and discovering our imaginal potential rather than confining it to be a solution to our problems. There is a need for deep listening to diversity. Are we embodying the other narratives and how do we connect to that? How do we include the diversity of narratives?” Shweta asked while she looked each of us in the eyes.

For the last few days we’ve been exploring learning as story, including the story we like to share about our voyage. That question evoked a fascinating diversity of perspectives. It quickly became clear that we didn’t have a common story (yet) about our trip. We each saw and experienced things in slightly different ways, apart from the time that Ralph tried to catch a fish. We all agreed that was hilarious!

Robert urged us to explore the transpersonal context of our story. He offered, “It’s all about community, the community is the story place of learning.”

Henk agreed and added the importance of shifting focus from me to we, to us. Being together on a boat for all those weeks sure has really helped to develop this sense of we and us. It’s also made us more aware of the role of place, how places can connect and isolate.

Then there was that night that some of our crew really loosened up. Was it the beer or the rum? Oh boy, oh boy, we had no idea that Mr X had such a fascinating past. We’d better not reveal his name here. Who knew that he had lived such a mythic life? So completely different from the composed manner in which we had all known him. Fascinating how these mythic patterns are always there just beneath the surface, and when you least expect it they bring us into the story of whole other dimensions.

The day before our trip, one of the mavericks from Africa wrote to us that he wasn’t able to join as his family needed him. He urged us to keep learning from the stories of the global South, as their experience of the land of thrivability might be entirely different from many of us. He warned about the dangers of the dominant systems and how they have colonized our minds. Kurt agreed with him, and reminded us of the maroon archetype for decolonizing our minds. There are just so many layers of stories in each of us...

Yesterday was fun. We each told each other a story about ourselves that we’ve never shared before. We could have kept going till deep in the night, but sealife has a way of making you really sleepy at the end of a long day. We’ve learned so much about each other and about this journey of thrivability by learning as story. We started to enter the new story, a story that connects us to life, each other, and our future as co-creators of our common destinies.
Through this chapter we will explore the various perspectives of “Learning as Story”. We have structured this inquiry again in three parts:

- Learning as Story in Place.
- Exploring the Mythic Structures of Learning.
- Entering the New Stories of Learning.

### 7.1 LEARNING AS STORY IN PLACE

Learning through storytelling has been the focus of indigenous cultures for thousands of years, and longer. The stories of indigenous cultures cultivate a sense of belonging to life in deep connection with the natural places that grow us up. A common saying of the Australian aboriginal people is to say that the “land owns us.” Land as identity and relationship is the first step towards acknowledging nature as being, and not just nature as a commodity; a natural capital or ecosystem service provider.58

Every place of life includes multiple stories and layers of meaning, which we internalize as our human experiences of life. In many indigenous cultures, story is land, land is belonging, and belonging is life as family. In Australian aboriginal culture, storylines are the leylines and nervous systems of the ancestral Beings through which they story the world into being by creating the spiritual places of power within the land that births us. Each place brings forth different powers, qualities, and responsibilities, which are to be honoured, discovered and grown through as future Custodians of that story in place. Custodians are partners in creation who continue the Dreaming in accordance with the laws and codes of that Dreaming and the Spirit of that place. In Western education we have lost so many of these rich dimensions of storying our connections and belonging to life.

58 Listen to Australian Aboriginal Yankunytjatjara elder and former traditional owner of Uluru, Bob Randall: “The Land Owns Us” – https://www.youtube.com/watch?v=wOoWIVRTJXw
“Place-based” learning and learning as “story in place” becomes increasingly more important for developing our connection with the natural world. Without an experiential relationship with the natural world, people will not develop a sense of belonging as part of our natural world. People only tend to care for what they feel connected to, hence it is simply not possible to develop sustainability competencies or ecological stewardship without storied connections.

Storied our connections and restoried the dualistic narratives of our mechanistic legacies is fundamental for developing ecological awareness and future-creative capacities. Our entire universe is an unfolding creative story that continues to generate new chapters of life. Stories can also engage the deeper mythic elements of our psychological structures, which are essential for any process that involves regeneration. Narrative is at the forefront of both education and economics. Reflect for a moment on the following questions:

- What is the story that you tell yourself and others about the time in which we are now, and the opportunities this time affords?
- What stories are you telling yourself and our children about the challenges and opportunities of this time of transition?

Imagine how different our focus can become when instead of teaching children about a universe of parts and particles we share the narratives of a living and conscious universe. The writings of Brian Swimme, Thomas Berry, Duane Elgin, Elisabet Sahtouris, Mary Evelyn Tucker, Gregory and Nora Bateson, Satish Kumar, Anita Sanchez, and Donald Trent Jacobs are particularly useful to include in transformative learning curricula. As well as any other literature, film, or medium that shares an indigenous worldview whereby the interconnectedness of life is naturally emphasized. We recommend comparing such narratives with those that dominate in mainstream narratives, to explore which of these narratives are in tune or out of tune with the narratives of life. Many children are still learning about evolution and the journey of ‘humanizing’ as a journey of struggle for survival on a planet of scarcity, ruled by politics of competition and dominance. Imagine if instead children learn about deeply inclusive principles and stories, such as those expressed through the Humanity Charter by Home for Humanity:

HUMANITY: WE SOURCE OUR HUMANITY IN UNITY
“The Unity of all Life is the Source and Sustenance of Our Humanity, We aspire to embody the ‘unity’ embedded within ‘humanity’: the unity within us, between us, and with all forms of Life.”

~ Humanity Charter

Unfortunately, many of our mainstream economic and governance systems are still built on this limited narrative of life. Promising progress through divisive competition between people and separation from nature. Learning as story in place tells the story of evolution as mythic adventures through which species develop their collaborative capacities for creating new futures, in ways we haven’t even begun to imagine. Evolution also includes narratives of competition, but not in the ways that we as humans have made this our modus operandi.

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60 Listen to Australian Aboriginal elder Dr Miriam-Rose Ungunmerr, as she explains the practice of ‘Dadirri’, for Deep Inner Listening and quiet still awareness to connect us and nurture spiritual well-being – https://www.youtube.com/watch?v=tow2R_ezL8
61 “Fantastic Fungi” by Louie Schwartzberg – https://www.youtube.com/watch?v=bxABOl2y6oA
7.1.1 Collective Learning and Collective Consciousness

The purpose of this Blueprint is to provide new perspectives that can stimulate new and deeper understandings of the nature of reality and how we can apply this for learning for regeneration and thrivability, as well as the much needed educational transformation in our societies. The following perspectives are offered to further stimulate new ideas about collective learning, as well as the role of collective and place-based memories.

Collective learning would typically refer to various forms of group learning, i.e. learning together, which can create bonds between people and form learning communities through shared learning experiences. Learning communities for regeneration and thrivability are essential, as we will explore in more depth in the next chapter "Learning as Community." In this section we will explore something that is less conventional and perhaps even controversial for some. Namely, how our human consciousness can come into a state of morphic resonance with collective consciousness fields in the places where learning takes place, which can provide access to information and abilities that cannot be explained by mere individual learning efforts.

These phenomena of morphic resonance have been documented and researched by biologist Rubert Sheldrake for decades who claims memory is inherent in nature. He formed his theory of formative causation based on the idea of morphic resonance and based on a series of experiments to explain how past patterns and behaviors of organisms can inform and influence those of similar organisms in the present. His theory further aims to reveal the various nonlocal connections between organisms that enable direct communication and information exchange beyond space and time.64 He explains in his theory how natural laws behave more like habits, rather than immutable laws, which create morphic memories in the collective consciousness fields of life that in-form the present (Sheldrake, 1987). His experiments include how groups of people and animals learn to solve certain challenges more easily when that same challenge has been solved by others before them, and without prior exchange between these groups.65 Morphic fields, according to Sheldrake, contain the memories of all that took place as a presence of the past, which then in-forms and shapes what manifests in the present from these shared fields of life.

There is so much information that surrounds us, and which may even form part of us, that we are not conscious of. This may directly influence our feelings and behaviours in ways we do not know. Much of this information, including the presence of the past, lives in our subconscious or even unconscious minds, and that is precisely the source of many stories. Writers will tell you that the stories they share have a life of their own, as if they pull this information from the deep waters of the unconscious. Deeply engaging stories create morphic resonance fields between people in shared experiences of meaning, emotion, and anticipation.

Learning as a story in place can become so much more engaging when we support people to enter into a state of morphic resonance with the information they seek to learn from. For example, by sitting near a tree and imaginally connecting with the life force of that tree, intending to form a relationship and imaginal connection to the intelligence and wisdom of that tree and its place in life. Or by giving people in a group a breathing exercise for syncing and harmonizing their collective consciousness to establish a morphic resonance between them.

64 "Morphic Resonance After Forty Years" by Rupert Sheldrake – https://bit.ly/3gfHAJr
65 Rupert Sheldrake’s theory is based on the notion that nature learns and evolves through morphic resonance with morphic fields that form part of life (Sheldrake, 1987).
Anneloes Smitsman has conducted many such group learning processes for decades with people from all over the world, both physically as well as online. She has noticed a significant shift in people’s learning experiences and capacities when she first helps the group to come into resonance with each other, and by relaxing and syncing their attention through a quick breathing exercise or an imaginal process (Smitsman 2019). She has also noted how group dissonance can make people feel tense, argumentative, out of sync, and unsafe, and how this can negatively impact people’s learning capacities and experiences. People often report how subconsciously they do not feel safe to open up in dissonant group settings.

Here is why it is important to become aware of the morphic field dynamics of our collective consciousness. Most formal education is facilitated in classroom settings where people are asked to learn in groups. Many people are learning in a group classroom setting for at least 20 years of their life, especially if they also go to university. That is a huge amount of time spent in groups and collective learning settings, which for the most part are facilitated by educators who are themselves unconscious of the collective field dynamics of their classrooms. Very few teachers harmonize the collective consciousness of their classroom prior to teaching, or ask people to share about their experiences of the field dynamics of the groups in which they are learning. And yet, the impact of unhealthy or dissonant group dynamics can significantly impact people’s learning experiences and developmental capacities, and in particular children. Learning for regeneration and thrivability requires this essential awareness of group dynamics and collective consciousness.

When people learn in a group in ways that are harmonic, everyone in that group is lifted up and people’s learning capacities can become greatly enhanced. This understanding is foundational for entering into and co-creating a new story of our human evolution, one in which we become conscious of ourselves and each other as individual and collective expressions of life. We offer the following suggestions for learning facilitators and educators to enhance the group dynamics of collective learning for regeneration and thrivability:

- **Prepare yourself** – Get present to yourself and your body, release your own tensions, and harmonize your awareness through some relaxing breaths. Form a clear intention for the kinds of learning experience you wish to facilitate and support. Connect with your inner wisdom, the collective wisdom of your group, and the wisdom of the land on which you are, and hold the intention for this to harmonize and align.

- **Prepare your learning space** – Whether your learning space is a physical classroom or an online learning space, create a healthy and welcoming atmosphere. Find creative ways to bring nature into the classroom, if possible. For online learning experiences, a screenshot of nature and harmonic music while people are entering can create a welcoming feeling.

- **Prepare your students** – When your students have entered, ask them to become present in their bodies here and now; to relax for a moment and let go of whatever it was they were doing. Bringing their awareness here and now. You can give your group a quick breathing exercise to harmonize their fields: *Breathing in, connecting with life within and around them, revitalizing their energy and awareness. Breathing out, relaxing and letting go of any tensions*. If appropriate, you can also ask your students to form a clear intention in their heart and mind for what they like to receive from this class, and how they like to support this time together to become a wonderful experience for everyone.

- **Create meaningful connectedness through storytelling** – If the collective field of the group still feels unsettled or dissonant, share a heart connecting story that gives voice to the feelings of unease in a way that makes it okay to talk about it, and perhaps even laugh about it together. If the group is tense because of any hardships they have experienced lately in their lives, find some time or a special occasion to invite a conversation about this, and again in a way that is safe and supportive.
● Healing collective places of hurt – When facilitating a learning process in places where there has been violence, conflict, trauma, or life threatening situations, connect with the collective field of that place and acknowledge the trauma and those who have suffered there. Invite the collective consciousness of that place to respectfully share what it needs to heal. If appropriate, you can facilitate this as a group exercise for your class by asking the students: “If you were the place where all this hardship happened, what would you need to heal and feel safe again? How can we help to restore the healing power of life here? And how can we help to regenerate the collective consciousness of this land, which also includes all the people, animals, and other life forms who experienced these hardships?” Then allow your students to spontaneously share their ideas and feelings. You can also ask them to draw this or write a letter to this place, or to share/write/draw this together on a collective storyboard. Show them how by doing so you are together co-creating a new story for this place and each of us, one of healing and the renewal of hope.

● Regeneration by seeding new life – To complete a healing process, explore how together with your students you can plant new life in the places of hurt and harm. For physical places of trauma or in a physical classroom you can plant a flower or some herbs or other plants through a collective agreement that this plant represents the new life that is entering to bring harmony, peace, and healing. For online places, you can share an exercise for planting your intentions for the regeneration of life in the collective fields that need our help, by planting a smile, joy, love, care, peace, and seeing this collective field regenerate with vitality and come alive with all the beautiful qualities of our consciousness and loving intentions for wellbeing.

7.1.2 Collective Learning Inquiries

In chapter 4 we explored the presence of the future and how this enables us and every living system to restructure, regroup, heal, transform, and evolve. The previous group exercise of section 7.1.1 is a useful example for how to intentionally work with the future potentials of regeneration and thrivability to heal the presence of the past and become aware of our collective fields of meaning, identity, and memory. Information can exist in our collective fields as morphic memories or patterns, as well as imaginal space of future potentialities. Learning and development happens by sensing, processing, coupling, structuring, and integrating information to become knowledge, wisdom, meaning, and understanding.

Storytelling is really the art of cohering all this information into meaning, so we can then process this for understanding. Leading cosmologists and physicists even go further to suggest that the nature of consciousness, matter, and reality is in-formational.66 This informational understanding of life and reality also raises several fundamental questions for collective learning:

● How does information of our past through collective memories influence how and what we learn today?
● How does the information of our futures through shared imaginal spaces influence how and what we learn today?
● How can we become more conscious of the presence and influence of the past and futures within ourselves, within the groups and cultures we form part of, and within the morphic fields of the places in which we learn, live, and evolve?

66 For those interested in taking a deeper dive into information as the structure of reality and matter, please see the work of physicist David Bohm (1980) on the implicate and explicate orders of reality as referred to earlier (1980) and cosmologist Jude Currivan about the Universe as a Cosmic hologram (2017).
What new paradigm research in consciousness, quantum field theory, and informational sciences are revealing is how collective learning is intrinsic to life itself. Complex living systems learn as a collective. What gets learned becomes part of the field in which learning takes place. In section 2.2 we shared about the Noosphere, as a global mind that is becoming conscious of itself in the human experience. If we add to this the idea of a global learning mind, we may find ways to accelerate our human development through carefully curated collective learning experiments. In particular, by cultivating the coherencies in collective learning that enable this Noosphere to manifest more directly within us.

Our innate ability to access, process, and integrate information through resonance with the field dynamics of life or consciousness offers a whole new frontier of learning and development. This understanding is hardly being utilized in mainstream education. Although it is beyond the scope of this blueprint to dive more deeply into this exploration, we believe it is essential to explore the ways that field dynamics can accelerate and cohere our collective learning capacities for each of us.

Furthermore, many children are forced to learn in environments that hinder, instead of facilitate, our resonance with nature. Dissonance from nature can lead to shut down of vital brain-heart coherencies which also affects our learning and development capacities. For example, a walk in the forest provides a much better learning environment for learning about and from nature than learning about a forest in a cemented stuffy closed-off classroom without the presence of nature.

Our human attuning capacities to the field dynamics of collective consciousness can also be seen as an innate musical ability that we share with other species and organisms. It may also explain why sound harmonics can so powerfully alter our consciousness states and bring large crowds of people into a shared experience of meaning. For example, it only takes a few beats to sweep a large group of people into dance and synchronized rhythms during a rock concert.

Furthermore, collective learning can also enhance the evolutionary coherence of the systems we form part of, by creating a deeper harmony and fine-tuning between all the members (elements) of a system. Similar to how people in an orchestra learn to play together, without this being imposed from above or through a central organization.

Let us now weave this back to ‘Learning as Story’, the focus of this chapter. Collective sense-making practices and opportunities can help people to become conscious of the information that forms part of their identity and development.67 This can take the shape of storied forms of learning that helps us access and become aware of the archetypes and information that lives in our collective (un)conscious as well as the places where we live and interact.

67 Home for Humanity provides many learning explorations for this purpose – https://www.homeforhumanity.earth/
We have summarized this section through the following recommendations for exploring how you can apply these ideas in education and for our personal development:

- **Explore the presence of the past** – Support students to explore the presence of the past in their places of learning and development. For example, by asking students to connect with their elders and learn about the stories, dreams, and cultural heritage of those who lived here before them. Explore what animals and ecosystems lived in their country or place before them, and let them reflect on what happened to the information of the animals, plants, insects, and ecosystems that are no longer there or went extinct. Consider whether and how this information, or these earlier abilities, have now become part of another ecosystem, and may even form part of latent qualities and capacities within us. Inquire why stories of dragons, and other mythical animals, continue to be part of our human collective imagination, myths, dreams and stories, and what these qualities represent in us today.

- **Explore the presence of the future** – Support students to explore the presence of the future in their places of learning and development. For example, by asking students to share their dreams, hopes, visions, and ideas for the future. Envision the multiple futures that live within us; those that are ideal or optimal futures as well as desired, undesired, unknown, and probable futures. Explore how these futures are present in our stories, narratives, feelings, and dreams.

- **Explore the narratives and archetypal structures of our stories** – Support students to become aware of their own life as an unfolding story that forms part of larger stories and places. Discover how stories connect us to places, people, and possibilities. Explore the deeper archetypes of our stories and how this evolves over time, and how we can change our stories – personally and collectively.

- **Explore how our stories can help heal trauma and suffering** – Support students to become aware of the traumas and suffering of the places in which they live and grow up, as well as the trauma of our collective injuries and inflicted harm. Focus on narratives that provide a safe space for expressing, sharing, and revealing the many layers of our personal, cultural, and collective traumas. Raise awareness about the ways that trauma and pain may continue to be part of us, and how this requires sensitivity, care, empathy and compassion. Help students understand the indigenous principles of our relatedness and interconnectedness; how the hurt of one is the hurt of all.

- **Enhance the harmonics of unity in our places of learning** – Support students to safely enter into collective consciousness states of unity and harmony, through collaborative activities in arts, storytelling, poetry, music, dance, theatre, and sports that can create shared experiences of meaningful togetherness and deeper appreciation for each other and life.

- **Include nature in our places of learning** – The presence of nature in classrooms and places of learning has a remarkable effect on our state of learning, as well as opportunities for learning outdoors and being immersed in nature. Create spaces for nature in our schools and other learning environments, for example by including animals, plants, trees, ponds, and food gardens.
7.2 EXPLORING THE MYTHIC STRUCTURES OF LEARNING

Our next exploration of Learning as Story is about the mythic structures that form part of our human psyche, and can connect us across time and space to the deeper transformative powers of life and our universe. According to mythic scholars such as Carl Jung, Jean Houston, and Joseph Campbell, mythic structures can be likened to archetypal psychic structures that shape our collective unconscious. Myths can take the forms of allegories, fables, and even fairy tales. As mentioned by Jean Houston:

“The realm of myth exists beyond time and space and daily reality. It is a symbolic world that dwells within us at levels deeper than our normal consciousness. And yet, it can be openly and vividly engaged in ways that expand the possibilities of every aspect of our lives. But to reach these depths and heights, we must pledge our commitment, our theatricality, our excitement. We must not bore the gods – or ourselves. When we energetically and dramatically encounter this mythic realm and the beings who dwell there, we begin to understand that our individual lives – our personal stories – echo the events and truths of their lives and stories.”

~ Jean Houston (2009, preface).

Myths can provide powerful means for collective sense making, especially for exploring the archetypal structures and potencies of our cultures and identities. By working with myths, we can learn how to access latent and new capacities, both personally and collectively. However, myths can also unite people and cultures in acts of harm and violence, exactly because so many people are searching to belong to a myth that tells a more powerful story of their lives and countries. Myths also form part of our cultural heritage and contain essential teachings and wisdoms from our ancestors, especially for times of challenges, trials, and hardships.68

7.2.1 The Mythic Structures of Trading Life

In chapter 2 we explored the impacts of the mechanistic worldviews and sciences. Through this section we will briefly explore some of the earlier religious worldviews and mythic structures that have long shaped our assumption of what is required to evolve as life. In particular, the mythic belief in sacrifice.

For thousands of years, people have believed that sacrifice of people and animals was necessary for religious reasons or to settle a balance with the spirits of nature. This was often done to exchange a sacrificed life for protection, fertility, or power by forces believed to influence the direction of human life. One could say that sacrificial exchange forms part of trading.69 Trading has been part of human development since our early beginnings, even though not all cultures chose the sacrificial route for their development. The belief in sacrifice continues to persist in many of our human cultures today, and even more so as an economic doctrine where the lives of many are sacrificed for the gain and influence of a few.

This also raises the question whether the mechanistic scientific worldviews really did transcend the mythic belief systems it sought to replace (as is often suggested). In particular the religious belief in blood sacrifices or self-harm, in order to cause a greater good for others. In our modern cultures of today, many people are raised with belief systems such as; “no pain no gain, and success comes with a prize.” Sacrifice, as a form of trading for success and progress, is still part of the dominant economic narratives. And this narrative also features in many of the stories and films children read and watch.

68 Indigenous cultures have guarded and passed down their mythic stories and worldviews during times of immense hardships, including the extensive harm of colonization and cultural assimilation. See also storytellers like Charles Eastman, Leslie Marmon Silko, N.Scott Momaday, Paula Gunn Allen, and Joy Harjo, among others.

69 Please note that this section is written without judgement about the cultures and religions that practice such acts, and these points are raised here to explore our assumptions of life and reality.
In a world where people and planet are expendable and replaceable, and the value of securing dominance and superiority outweighs the value of life, education becomes marginalized and reduced to ‘factory learning.’ We offer the following questions for inquiry about this topic and to become aware of our (hidden) assumptions about life and development:

- Do you believe that sacrifice in some way or form is necessary in order to advance or progress in life? If yes, why? If no, why?
- What do you consider the difference between a ‘sacrifice’ and an ‘offering’?
- Do you believe that participating in economic activities requires sacrifices from you, and if yes in what ways?
- Do you consider that reciprocity is an important principle of life that also needs to apply to our economic systems?
- What do you believe needs to change in order for our human societies to become reciprocal with all who form part of it, including nature and non-human life?
- If you were to design an economic system without sacrifice of life, what would be the qualities of such a system and what design principles would you apply?

7.3 CREATING NEW STORIES OF LEARNING

Now more than ever we need stories and narratives of hope, unity, love, creativity, and collaboration. Stories that celebrate who we can become as human beings, and not merely human doings. Stories for an education of the heart. Stories can provide us with courage, strength and compassion during the darkest of times and can help us navigate for “the land of thrivability.”

This Blueprint, and our story of our Sea Voyage, is a co-creation of a new story of learning. New in the sense that we are applying new ways for bringing together our ideas, insights, feelings, and suggestions for transformative education and life-centered learning. Also, new in the sense that we have never before been in this pandemic context, whilst at the same time under pressure of severe planetary tipping point, and whilst living in a technologically interconnected world of immediate information exchange. There are of course many more ways in which our story is a new story of learning, yet the point of this section is to stimulate how you as the reader can help co-create a new story of learning for you and the communities you form part of.

The wonderful thing about stories is that even old stories can become new by sharing this in whole new ways.70 In indigenous communities a child is told what may appear as the same story over many years. Yet, it is only upon listening more closely that you'll discover how the child is being introduced to new elements of their story each time the story is told again. How can we each become story stewards for life centered learning and the journey of our transformation? A starting point is to also include new ways and forms of knowing and learning, which we will explore in more depth through the next section.

70 Dave Pendle mentioned how, “practice of engaging in the paradox of appreciating and reinterpreting the timeless, while exploring its relevance and application in time, is to me, a big step towards encompassing the complexities of our age, not merely cognitively but more at a more humane, and profound level.” Source.
7.3.1 Decolonizing the Mind

Educational transformation begins within, we therefore recommend to also explore the topic of ‘decolonizing’ our mind from all forms of dominant views and practices, and in particular the colonial mindsets. Decolonizing our mind begins by bringing in the ways of knowing and understanding that have been severely constrained and suppressed by the doctrines of domination and control.\(^{71}\) This includes indigenous knowledge, perspectives from the Global South and developing countries, feminine perspectives, and perspectives of non-human life.\(^{72}\)

The colonization of our minds goes further than the impacts of the colonial era of Western imperialism, and also includes a critical review of dominating patriarchal narratives that have harmed our diversity in human cultures for thousands of years. When searching for the roots of this human pattern of violence and domination, it appears to originate from the very beginning of our human species, including our treatment of the Neanderthals.

We highly recommend a deeper exploration of how patterns of dominance, colonization, violence, and division have been able to develop so strongly in our human species, and how we keep it alive and pass it on to the next generations. The following literature may support this exploration further: Resmaa Menakem, “My Grandmother’s Hands”; Vandana Shiva, “Earth Democracy”; Tyson Yunkaporta, “Sand Talk”; Rigoberta Menchu, “Crossing Borders”; Wangari Maathai, “Unbowed.”

Dominance and violence have formed part of the human experience since our beginnings, and yet do we fully understand why this is so? How can we change this story of our human becoming, into one that is more peaceful, caring and compassionate? Although it is beyond the purpose of this Blueprint to explore the roots of violence in-depth, we offer the following questions to stimulate deeper conversations and inquiries around this important topic. Knowing that superficial answers do not transform the causes of our violence, please read the following questions with openness for what it may reveal and trigger within you. For those of you working in education, you can also explore these questions with your students:

- What role do we each play in the old and new stories of violence and division?
- What can we learn from more peaceful and caring cultures in the ways they educate their young to learn about the dangers of violence and domination?
- How does the colonial pattern or impulse of domination live in you and in each of us?
- What do we seek to achieve and gain by feeding these impulses, how do we transform this (starting with ourselves)?
- What can we learn from Global South perspectives regarding the impacts of colonialism and post-colonial global capitalism?\(^{73}\)
- How can we co-create new stories of learning and development that are truly inclusive of our diversity and united in shared principles of care, compassion, and respect?

\(^{71}\) Read also the work of Kenyan novelist and post-colonial theorist Ngũgĩ wa Thiong'o.


\(^{73}\) Although it is beyond the scope to explore this here in-depth, we do want to note that a critical assessment of the economic colonization of our world and minds is essential to address through education.
To complete this section, we offer again a case-study from Mauritius by the lead author who lives there.74 Mauritius has a long colonial history that began with the Dutch, followed by the French and British. On the island of Mauritius is a mountain called “Le Morne Mountain”, which became listed as an UNESCO World Heritage for maroonage in 2008, for the significant role it played in the fight against slavery and oppression. The patterns and scars of colonialism continue to play out in various ways on the island. First of all, many people do not learn at school the true or more complete story of the fight of the maroons that took place on the top of Le Morne Mountain.75 They are not aware of their colonial history, the identities and stories of their ancestors, and how these collective memories and patterns continue through them. Education can offer a major opportunity to raise awareness not just of the impacts of the colonial pasts, but more importantly of our human tendencies to want to rule over others.

Furthermore, there continues to be institutional and corporate resistance to more fully address the political and economic dimensions of colonialism, and in particular how the politics of dominance never stopped. As is the case in many other countries as well, the doctrine of dominance that is at the root of the colonization of our minds, doesn’t stop until we stop acting this out. Until we transform, this pattern of dominance and oppression, and the dualities between the oppressed and the suppressed, will only seek to find new ways and expressions. The roots of our disunity and divisions are not outside of us, this is the long road to freedom that every person needs to learn how to take, as Nelson Mandela so powerfully demonstrated through his life.

The internalization of the colonial dynamics happens subconsciously within us for many, where it shapes our beliefs, memories, and dreams, until we decide to consciously descend into those inner spaces and befriend the shadow within. Furthermore, the suppressed often become the next oppressors, when the politics of power turn the tables. Students at school often learn about colonization during history classes as if this is merely a phase of our human development in the past, while not made aware of how these same colonial dynamics continue to form part of their culture and ways of thinking. The colonialism of the past is the global capitalism of today, the economic agendas have not significantly shifted behind the geo-political agendas of many nations and groups. Global capitalism has overturned local food production, cuisine, and all forms of cultural expressions, as well as destroyed many indigenous communities, languages and practices.

For those living in the Global South, or on a small Island like Mauritius, younger generations often seek to be part of the global world that is portrayed through their television, social media, and movies, without realizing the social engineering behind it. Many are unconscious of the deeper manipulation that is happening with the economization of our cultures. Education needs to play a leading role in preparing younger generations to reclaim their minds and their self agency and governance of their lives and interests. When people do not know how their engagement is being manipulated for corporate interests, they become even more susceptible to be colonized in whole new ways.76

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74 Mauritius is a SIDS (Small Island Developing State) in the Indian Ocean region. There are no indigenous people of Mauritius, people were brought here initially as colonizers and slaves, and later indentured labourers, through the colonies of the Dutch, French, and British.

75 You can learn more about this through the story of Le Morne Mountain and the Maroon Quest by Anneloes Smitsman and Kurt Barnes – [https://www.earthwisecentre.org/blog/a-trilogy-1-the-fall-the-maroon-queen](https://www.earthwisecentre.org/blog/a-trilogy-1-the-fall-the-maroon-queen)

To summarize, education for decolonizing our minds and cultures is a process of deep unravelling of the multiple interwoven strands of violence, domination, trauma, division, and harm – in ways that are seen and known as well as in ways that are unseen and unknown. This process of unravelling and healing requires safe learning spaces for exploring these deeper issues, as well as for exploring how together we can heal the harm and multiple layers of trauma. Only then can we genuinely co-create a world based on freedom, mutual respect, and dignity for all people and non-human life.

We offer the following suggestions and guidelines for starting these vital learning and healing conversations:

- **Explore freedom and wellbeing from multiple perspectives** – Explore with your students what freedom and wellbeing means for them, and what it may have meant for their parents, grandparents, and ancestors. Explore how the pursuit of freedom and wellbeing shaped the lives of their families and cultures, and the impacts of this pursuit on the lives of others, including our planet.

- **Make the narrative patterns visible** – Explore the underlying assumptions, expectations, belief systems, and cultural and ancestral doctrines of the narratives we feel attracted and repelled by. Explore the relational dynamics of dominance and suppression and polarities of the oppressor-oppressed, and how this affects our sense of agency and trust in ourselves, life, and others.

- **Facilitate third way approaches to heal the dualization of pain** – Share about the dynamics, feelings, and impacts of the colonization of our minds through third way approaches that help to heal the divides. In particular to make conscious, and eventually transform, the interwinements between victim-perpetrator and oppressor-oppressed.

- **Introduce new perspectives and mutual learning opportunities** – Explore how through digital learning opportunities students from various cultures, countries, backgrounds can exchange with each other about these topics, and especially with indigenous communities and those living in the Global South or former colonies.

- **Co-create new stories of learning and connection** – Facilitate the co-creation of new stories of identity belonging, healing, and how we ‘humane’ together, which emerge from learning collectively how to heal the traumas of our pasts and nurture into being the future worlds we seek to become. Explore with your students the multiple creative ways for crafting, creating, sharing, and expressing these stories as (short) films, poems, art, plays, articles, blogs, books, paintings, sculptures, and more.
7.3.2 Storying our Connections through System Sensing

For this final section of the chapter, we will explore how to story our connections for the weaving of regenerative and thrivable cultures. Working group member Vlado Lobotka brought forward the concept of "vertical literacies," and added how actualizing our human potentials moves through states (and not just stages) of consciousness. He explained how vertical literacies can help us become aware how the past is internalized in our perspectives, and how current perspectives in turn influence this internalization of our past, and all experiences as we see it. He proposed that developing a more refined, differentiated and integral awareness is essential for learning for regeneration and thrivability. This also connects to our earlier exploration of the presence of the past in sections 7.1.1 and 7.1.2.

Developing integral consciousness while learning for standardized tests and rigid learning outcomes through standardized curricula is challenging at best. Developing integral consciousness requires being able to enter into flow-states without pressures and exploration of the multiple perspectives that life and this Blueprint offer. It also requires developing system sensing capacities, which are quite different from the more commonly known system thinking capacities (see Smitsman, 2019). We develop system sensing capacities by becoming aware of: the informational flows and dynamics that form part of our experiences, the archetypal structures on which we base our beliefs and sense of reality, and the presence of the past and future within and around us. To develop this awareness we can develop and apply our imaginal capacities, as well as the many other capacities that emerge from learning for regeneration and thrivability, as explored through this Blueprint.

As mentioned in section 5.1.3 many people have never been taught or trained how to work with complexity, non-linearity, and think systemically. Furthermore, many people have not learned how to trust their subtle intuitions and sensory awareness of the systems they form part of and bring into life. Even though we are all born with the sensory organs for developing system sensing capacities. Children are natural system sensors, and immediately notice subtle changes in the expressions and feelings of their parents and caregivers. Children also know intuitively how to employ their systemic sensing capacities for exploring the affordances in their inner and outer environment, including how to adjust their bodily stances to reach for new goals.

System sensing also helps us to become aware of all kinds of subtle nuances that form part of our lives and inform how we feel about ourselves, others, and our world. Whether we are conscious of this or not, we all form part of social systems and social fields that we together weave into being and become our stories. When our focus on life is predominantly intellectual, we miss out on all these subtle dimensions of being and interbeing. Learning for regeneration and thrivability requires that we become aware of all these subtle nuances and how the dots connect.

To complete this chapter, we offer below an exercise by Anneloes Smitsman for developing depth awareness and integral consciousness. We applied this practice as a working group during one of our Blueprint sessions. You can contextualize the questions and go through this exercise with others or by yourself.

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77 See also Otto Scharmer – https://bit.ly/3kvXVNf
78 Social Presencing for making nuances visible – https://www.youtube.com/watch?v=qMPe0Drjfk
Apply this exercise for developing an integral awareness of yourself and life, and for weaving together five consciousness perspectives of what is happening in our world today and the change and actions required to shift our trajectories towards regeneration and thrivability. Relax and open yourself before you begin this exercise and release any expectations or resistance that you may feel:

1. **Future consciousness** – Connect with your imaginal powers and form the intention to enter into your future consciousness. Get a sense of your future consciousness within you, which offers you a higher perspective of the patterns in your life and the direction of your learning and development. How does your future consciousness look at what’s happening in our world today? What changes and actions does your future consciousness support for us as humanity to stop the destruction of our world and shift towards regeneration and thriving?

2. **Planetary consciousness** – Now connect with our planet as a living being, and feel the presence of our planet as your own planetary consciousness. This is nature seeing, feeling, and experiencing life as you. How does your planetary consciousness look at what’s happening in our world today? What changes and actions does your planetary consciousness suggest for us as humanity to stop the destruction of our world, and shift towards regeneration and thriving?

3. **Evolutionary consciousness** – Now connect with the consciousness of evolution within you, including those of bacteria, viruses, and fungi who have learned to work together for the evolution of life on our planet. Acknowledge how this evolutionary consciousness is also evolving your life. How does your evolutionary consciousness look at what’s happening in our world today? What changes and actions does your evolutionary consciousness suggest for us as humanity to stop the destruction of our world, and shift towards regeneration and thriving?

4. **Collective consciousness** – Now connect with the presence of collective consciousness within you, which includes our collective human consciousness as well as the consciousness of the plants, trees, animals, and insects, and more. How does your collective consciousness look at what’s happening in our world today? What changes and actions does your collective consciousness suggest for us as humanity to stop the destruction of our world, and shift towards regeneration and thriving?

5. **Personal consciousness** – Now connect with your personal consciousness, which includes your unique feelings, thoughts, experiences, and memories. Allow now the integration of each of these consciousness perspectives – future, planetary, evolutionary, and collective – to integrate within you. What changes and actions does your personal consciousness suggest for us as humanity to stop the destruction of our world, and shift towards regeneration and thriving?

Allow these multiple perspectives of consciousness to deepen your awareness of yourself, life, others, and our world. Allow this to mature within you as understanding, compassion, and wisdom.
7.4 SUMMARY

Learning as Story

Through *Learning as Story* we explored three perspectives:

1. Learning as Story in Place.
2. Exploring the Mythic Structures of Learning.

*Learning as Story* through these three perspectives helps us become aware of the archetypal dimensions of our cultures, stories, and identities, and serves to develop our sense-making and communicative capacities. These perspectives are foundational for place-based learning and to foster a deeper sense of connection and belonging, and to prepare us in becoming story creators for regeneration and thrivability. Furthermore, these perspectives and practices serve to develop depth awareness and integral consciousness, and help to decolonize our stories and minds by facilitating learning dialogues for healing the pain and trauma of oppression, domination, and division.

- The *Learning as Story* perspectives provide the necessary foundations for developing conscious communication, depth perception, and sense-making capacities and for becoming the story creators for regeneration and thrivability.
8. LEARNING AS COMMUNITY

The Sea Voyage Journal – Learning as Community

It’s been several months since we left the harbour of sustainability and set sail for thrivability. We have formed strong bonds that can stand many storms as well as disagreements. We have become a community, a team of future pilgrims as Teilhard de Chardin would have called us. The next step is exploring how we can become a global learning community. Sharing our stories with the world has helped hugely to make the world part of our voyage. Everyday people from all over the world are following us and sending us supportive messages. So much so that this has now become their voyage as well.

A few more weeks of sailing, then if all goes well we should be nearing the end of this journey. We still have no idea what the coordinates for this mysterious harbour are. We’ve followed the map from the message in the bottle as per the guidance given yet the last stretch cannot be found on any of the maps we know.

Meanwhile our boat has turned into a travelling school for transformative learning! While exploring Learning as Community, exciting ideas got sparked.

“Education is a nexus of solutions, it is not the solution. The school is already a gathering place of community members, let’s reimagine schools as the nexus of community building and transformation, a transformative hub.” Julian suggested.

“What if we completely re-envisioned the entire concept of a school. Just like what happened with our boat. In my visions of the future I didn’t see any traditional classrooms. All education was happening outdoors in nature.” Ralph added.

“University as a learning commons,” Shweta pitched in. “To nurture the innate curiosity of discovery of the self and the world that kids have. The real need for transformative education is to help older generations unlearn!”

“How about creating bio-regional learning communities?” Bill asked.

“Yes, as long as it also includes the seas.” Anneloes smiled.

“The community of life! One great evolutionary learning ecosystem.” Alexander laughed.

“Okay, let’s get focussed for a moment,” Bernd said. “We can’t all embark on a sailing boat. What are our strategies for weaving the mycelium networks of future education?”

“Yes, and in a way that also includes the younger generations and indigenous voices in this weaving and educational redesign. Creating bio-regional action learning centres.” Dave and Sophie added.

During the days that followed we came up with all kinds of wild design plans and ideas for new protopias. We also started to map out some of the incredible initiatives that were already happening from around the world. By becoming aware of all the great work of so many educators and educational transformation initiatives we started to realize that many people share our concern. The global movement for educational transformation is well and truly happening.
In those moments when our collective minds and hearts united, and became resonant with the larger field of consciousness through which we were travelling, we started to see glimpses of the coordinates of this new land of thrivability. As if something inside us was awakening, as we were awakening to the possibility of what was calling us forward.

This final chapter of our learning perspectives explores “Learning as Community”. The three-fold focus of this chapter is:

- Becoming a Global Learning Community.
- Bioregional Learning Communities.
- Weaving the Mycelia Networks of Future Education.
8.1 BECOMING A GLOBAL LEARNING COMMUNITY

“Forget everything I’ve been telling you about working with governments and bureaucracies! I’ve been lying here being an anthropologist in my own dying – fascinating experience, by the way; there is no hierarchy to it – and I’ve had an important insight into the future. The world is going to change so fast that people and governments will not be prepared to be stewards of change. What will save them is teaching-learning communities. They come together in churches or businesses or even in families. They could meet weekly and do your kind of exercises, especially ones that develop their capacities. There must be humor, laughter, games and good food as well. That will keep the participants coming back. Then, when they feel ready, they will choose projects to work on to help their communities. The only way to have a possible society, Jean, is to develop the possible human at the same time."

~ Margaret Mead, as quoted by Jean Houston (Houston, 1996, p.228)

Margaret Mead died in 1978. Already then it was clear that the world was about to change so rapidly that many would not be prepared to be “stewards of change”, as she said. The world is changing even more rapidly now – technologically, geopolitically, socially, culturally, economically, as well biophysically or geologically. The worst impacts of our climate and biodiversity crisis are still to come. The “possible human” that Margaret Mead referred to in her conversations with Jean Houston (who she considered her adopted daughter) have become the “future humans” in Jean Houston’s daily conversation with the lead author of this Blueprint, Anneloes Smitsman.79

The context has changed and yet the focus has not, namely how to inspire and prepare people to become the stewards of the commons: our common destinies, the earth as our commons, our common wellbeing, and our common futures. This Blueprint is an extension of that story seed from long ago, which reminds us that we all have (dormant) story seeds within us that will sprout as the conditions ripen. As we explored in the previous chapters, life is a continuously evolving living story. Within us live the story seeds of both our personal as well as our collective stories of becoming.

Education in its ideal form serves to nurture these generative story seeds of our future becoming. Through this section we will explore what it means to become a global learning community for our evolutionary development. We start by offering the following exercise for inquiry-based learning.

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79 The daily conversations between Jean Houston and Anneloes Smitsman, inspired by Jean’s earlier conversations with Margaret Mead, have become the Future Humans Trilogy – https://www.futurehumans.world/
Exercise for Collective Learning as a Community
by Anneloes Smitsman

We recommend doing this exercise with others, if this is really not possible, please use your imaginal powers to envision yourself in community with others while going through this exercise. To get the most out of this exercise, engage your creative skills by making a visual collage, systems map, or doodle what emerges for you while going through it. The idea is to become more aware of emerging futures and possibilities that exist within our shared spaces of learning. Create quality time and space to go through this exercise without interruptions. You can complete this exercise over a period of time, even up to several weeks, to keep building on the information that is emerging:

1. The key issues – Create a map of what you consider the key issues, in your local reality as well as our larger world. Focus on the issues that require collective learning and collaborative approaches for resolving these.

2. The opportunities – Add to your map the opportunities these issues provide in mobilizing collective learning and the kind of collaboration that can support humanity to become a global learning community.

3. The challenges – Continue to build on this map by now adding challenges and potential barriers that may hinder the resolution of these issues and our developing as a regenerative global learning community. Also indicate how challenges can transform to become opportunities.

4. What and how we need to learn – Clarify on your map what you consider the priorities of learning, specifying both the content of learning as well as the process of learning.

5. What and how we need to change – Consider also the content and process of what needs changing and the process for how we need to change, and become the change that can make the difference.

6. What and how we need to act – Consider now what we need to act on and these actions are to happen, in order to apply the learning opportunities and resolve or embrace the key issues.

7. Support and wisdom – Complete your map by adding resources, support systems, wisdom, and allies (both seen and unseen) that can be called up and may emerge as a result of our commitment to these issues and our collective learning process as a global community.

After completing the exercise above, notice what starts to shift in your awareness, perspectives, and the dynamics that are active in your life. If you are doing this exercise with others, also check-in what is happening for them as a result of this exercise, and celebrate the transition moments while working on these issues together.

The word “global” has come to mean many different things, and not all positive. The global economy, for example, has also come to mean the new colonialism of the economic elite. Globalization has caused much harm to our cultural diversity through the propaganda of mono-cultures and unconstrained free-market capitalist agendas. Accordingly, the concept of a “global” learning community may not sound appealing to marginalized groups, cultures, and identities who have suffered greatly by the politics of globalization. We want to emphasize here that this is not what we mean when referring to becoming a global learning community.

The vision for a global learning community, as expressed through this Blueprint, is based on a celebration of our diversity and emerges from a deep sense of our common identity as members of life. Human beings who share the Earth as our home with an incredible diversity of non-human life, a membership of being and interbeing. As mentioned by working group Dave Pendle, “Embracing a living systems worldview with the universe story at its centre, is (to me) the all-inclusive meta narrative that embraces and expands diversity as our common identity, and is at the heart of evolution.”
While exploring these various dimensions of what it means to be or become a global learning community, the following emerged in our group conversation. Shweta Srivastav mentioned how: “The role of education is also to help develop our capacity to explore what it means to be human now, while being able to look back simultaneously”. She called this the principle of “Oneness in Diversity.” Dave Pendle further added how: “This is also critical whatever the living heritage of any culture or civilization, has its wisdoms and its blind spots need constant re-evaluation in light of the challenge NOW to live into a different, thrivable future.”

We also explored the African principle of Ubuntu, “Becoming human in our togetherness, through relationship,” an essential principle for embracing key issues that only together we can resolve. We also explored similar principles, such as “Interbeing” as expressed by Thich Nhất Hạnh and Charles Eisenstein. We recommend offering these and similar principles at the start of collective sense-making processes. Especially, to ground us in the experience of our common humanity, and to emphasize respect for the diverse expressions of our commonness. Start by inviting people to enter into a space of “Ubuntu”, “Interbeing”, and “Oneness in Diversity”, before exploring issues that may draw us back into the more traditional ‘problem-solving’ modes that can quickly create dualistic narratives and stances.

In chapter 2, we explored the context principle of the Noosphere and the emergence of a global consciousness or global mind in the human experience. Protopias of global learning communities can serve as nexus points for co-creating such emergence conditions of the Noosphere (Smitsman et al., 2020). Whether you are a practitioner, educator, system designer, or facilitator, we highly recommend exploring community-based learning initiatives, and to acquaint yourself with the growing networks and movements that serve as protopias for emerging global learning communities.

Working group member Alexander Laszlo offered the following protopia inputs through his research on Evolutionary Learning Ecosystems in Latin America (among others). He mentioned how there is a growing movement of peer-to-peer learning that dissolves the conventional student-teacher and student-expert dualities (see Appendix I for examples). These peer-to-peer initiatives are facilitated by learning guides and active listeners, which naturally create communities of learning. Organizations such as “the Peer to Peer Foundation” are leading the way for peer based education and practice. The advantage of such self-organizing initiatives is that they can evolve rapidly and scale quickly, like “Escuela Nueva” for enabling child-centered collaborative learning to more than 5 million educationally disenfranchised people living in rural and urban poverty.

Furthermore, by developing greater relational intelligence and understanding of systemic flows, for example by using pattern languages and evolutionary systems frameworks, we can more easily shift away from static, stand-alone, ego-centric knowledge production. In other words, community-based learning experiments are prototyping new forms of networked intelligence and networked learning communities, which can significantly transform the mechanistic factory-based education molds. For further examples, references, and resources see Appendix I.

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80 A protopia (other than utopia) provides practices, pathways, and systemic designs for future possibilities that can be realized with the conditions and potentials available to us today.

81 World Unity Week events serve as protopia examples of the new kinds of movements that are arising and mobilizing whole new collective learning and action opportunities – https://worldunityweek.org/

82 See http://p2pfoundation.net/

83 See http://www.escuelanueva.org/portal
8.2 BIOREGIONAL LEARNING COMMUNITIES

Bioregion means a territory of life, which can also be translated into an ecology of life. Bioregionalism focuses on shared ecologies as the basis of identity and belonging, and not shared citizenship or nation-state boundaries. Bioregionalism is first and foremost a practice of, “intimately exploring, knowing, and caring for the natural and human communities within a region defined by nature, our bioregion,” (Bioregional Education Association, 2019). Bioregional learning is place-based learning, as we explored in the previous chapter, which helps people become aware of life as an ecology of interbeing in a shared habitat in terms of history, culture, belonging, identity, and natural patterns and cycles.

Bioregional learning communities are forms of global learning communities, yet with the added ecological focus of regeneration of their bioregion and place-based learning. Accordingly, bioregional learning communities can serve as the root system for what may eventually emerge as a global learning community of interbeing. This vision or trajectory of a bioregionally interconnected global learning community may be less technologically driven, compared to a global learning community that is digitally driven and then extends into the bioregions. The direction for how follows the purpose for why we co-create an interconnected world. A digitally and economically interconnected world that is bioregionally or ecologically focussed serves a different purpose and growth model compared to the capitalist model of globalization at the expense of bioregional health and wellbeing.

In chapter 3, Learning as Life, we explored how structures of materiality are essentially informational, and how the nature of this information is essentially holographic and holonic. Holonic information creates holonic organizational structures of holons (wholes) nested in greater holons, also described as holarchic versus hierarchy (Smitsman, 2019). These holarchic modes of organization and communication can be seen in the root systems of plants and trees, in particular the mycelium networks (see section 8.3), as well as in the growth patterns of most living systems. Accordingly, we explored in chapter 3 how life is a unified reality, which is also the foundation for an ecological understanding of life and human development. When this understanding is absent in design, education, and development, we create systems, structures, and informational models that grow by expansion at the cost of our diversity, and at the expense of ecologically networked relationships.

We have explored the consequences of this in chapter 3, section 3.2 as the systemic thrivability barriers of mechanistic systems. We bring this topic up here once more, to emphasize the important role that bioregional learning communities have in fostering a sense of belonging in a global learning community that is life centered and ecologically driven. Bioregional learning communities can serve as incubation hubs and evolutionary womb spaces for becoming evolutionary learning ecosystems (see section 3.3) for discovering how we can become regenerative and thrivable in the way we grow, develop, and evolve as a species based on vital ecological principles of life.

When the emphasis of global learning is ecological, and not just technological, the regenerative focus of the myriad of diverse bioregional learning communities can benefit from the digital opportunities that global learning communities may bring. Technology that serves ecology can help to facilitate a greater exchange between the various educational initiatives and learning processes from around the world, as well as fostering co-learning opportunities.
The original idea for bioregional learning centers dates back at least four decades. In 1980, Limits to Growth Lead Author Dana Meadows explained in her paper, History of Ideas Underlying the Balaton Group, how a group of systems scientists noted that: “Each agroeconomic region is so unique that the concept of transfer of technology is irrelevant. What’s relevant is the transfer of the capacity to develop technology and institutions that are consistent with the cultural endowment and the resource endowment of each region,” (Meadows 1982). The following section from Meadow’s 1982 paper illustrates this further:

“I also had twelve years’ experience of organic farming in a cold and rock-bound, but ultimately bountiful bioregion, with all the appropriate frustrations and joys that come from interconnection with the cycles of the earth. And lastly, I had knowledge that pointed to the limitations as well as the value of my scientific, systems-analysis tools.

Out of that combination came a vision of a number of centers where information and models about resources and the environment are housed. There would need to be many of these centers, all over the world, each one responsible for a discrete bioregion. They would contain people with excellent minds and tools, but they would not be walled off, as scientific centers so often are, either from the lives of ordinary people or from the realities of political processes. The people in these centers would be at home with farmers, miners, planners, and heads of state and they would be able both to listen to and talk to all of them.

The job of these centers is basically to enhance that capacity... to solve problems in ways that are consistent with the culture and the environment. The centers collect, make sense of, and disseminate information about the resources of their bioregions, and about the welfare of the people and of the ecosystems. They are partly data repositories, partly publishing and broadcasting and teaching centers, partly experiment stations and extension agents. They know about the latest technologies, and the traditional ones, and about which ones work best under what conditions. They are able, insofar as the state of knowledge permits, to see things whole, to look at long-term consequences, and to tell the truth. They are also able to perceive and admit freely where the boundaries of the state of knowledge are and what is not known.

Above all, the job of these centers is to hold clear and true the context, the values, the ways of thinking, through which all development plans and resource management schemes proceed.”


This vision by Meadows has recently been revitalized by Joe Brewer of the Center for Applied Cultural Evolution, who is actively creating just such a bioregional learning center in Barichara (Colombia), in collaboration with the Earth Regenerators Network. Joe has outlined 42 thematic design elements for creating regenerative education programs in the essay Guiding the Emergence of Humanity’s Future (Brewer, 2019), and he has further included a chapter on “Education for Bioregional Design” in his book The Design Pathway for Regenerating Earth (Brewer, 2021).
Globally, the Capital Institute is incubating a network of bioregional collaboratives under the Regenerative Communities Network, with regenerative education as one of its eight “key dimensions.” Several of the bioregional collaboratives explicitly identify as bioregional learning centers, such as in Sinal do Vale, Brazil and South Devon, UK. r3.0 is co-hosting the bioregional collaborative in the Connecticut River Valley (CRV) in the northeast United States, where Senior Director Bill Baue is serving as Co-Convener. As part of its commitment to equity, the CRV bioregional collaborative is hosting a learning journey on decolonization as part of a larger listening and mapping project for discerning the priorities of diverse communities in the bioregion. This collaborative also aims to launch a project to pilot the design of a toolkit for measuring bioregional carrying capacities of key systems (such as food & agriculture and energy), using social technologies such as Participatory Action Research, Prosocial, and Sociocracy. The next phase of this plan is to scale the toolkit across other bioregional collaboratives in the global Regenerative Communities Network.

8.3 WEAVING THE MYCELIUM NETWORKS OF FUTURE EDUCATION

Although it is beyond the scope of this Blueprint to provide an overview of all the various kinds of future education initiatives, the purpose of this section is to provide some recommendations and ideas for how existing and emerging initiatives of future education can be woven together as mycelia networks. For a better understanding of emerging learning ecosystems and case-study examples we recommended the detailed report, “Learning Ecosystems: An Emerging Praxis For The Future Of Education,” by Global Education Futures (GEF) (Spencer-Keyse, et al., 2020).

Building on section 6.1 Learning as a Connective Pattern and the previous section on bioregional learning communities, we will now explore how we can apply the patterns of mycelia networks for developing the collaborative root systems of future education. A mycelium (plural mycelia) is the vegetative body for fungi, which grow as branched tubular filaments (hyphae) that nestle around the root systems of trees. Mycelia form a “mycorrhizal network” that connects the individual plants and trees to transfer water, nitrogen, carbon and other minerals. Furthermore, mycelia also enable trees to communicate with each other through their underground connections (Holewinski, 2021). Life on earth has been able to evolve thanks to these amazing intelligent organisms called fungi and their mycelia. It can be said that we all descend from mycelia, as is explained beautifully in the documentary “Fantastic Fungi” by Louie Schwartzberg.

Mycelia play a crucial role for the health and evolution of the whole ecosystem, including the unlocking of essential nutrients in the soil for other species. The mycelia also act as natural carbon storage facilities, nature’s own climate smart technology! Furthermore, mycelia create systems and nutrients for mutual support, making it possible for the healthier plants to distribute nutrients to weaker plants and trees.

Learning as Community is a mycelium form of learning that connects, distributes, and exchanges vital information and resources to and between learners, educators, learning organizations, learning ecosystems, and the myriad of players in our shared landscapes of learning. This mycelium type of learning goes further than merely collaborative learning, namely by creating a unified field or web of information and resources within which collective and spontaneous organization and systemic consciousness naturally emerges in service for the health and thrivability of the whole. Going back to the three evolutionary principles of life in section 3.1, mycelia are the physical expression of these vital evolutionary principles in action.

85 https://www.r3-0.org/project/rcn/
86 See https://learningecosystems2020.globaledufutures.org/
87 For more information, see – https://www.fungially.com/blogs/growing-mushrooms/what-is-mycelium-natures-world-wide-web
The limitation of many existing collaborative initiatives is the focus on collaborative benefits by the one who initiates collaboration. However, mycelium forms of collaboration demonstrate a living network of interspecies communication, exchange, and value-creation that is not directed by the goals of one or a few species. Instead, mycelium forms of co-learning and collaboration are enabled by information sharing and resource exchanges based on the ecosystemic capabilities of common spaces that are interwoven between the various systems and subsystems that form part of the larger ecosystem. One could say that the mycelia networks of fungi act like a living worldwide internet or web, yet in this case the data are not controlled or manipulated by software designers and data mining companies.88

Many indigenous communities have applied this mycelium approach of collaborative learning for thousands of years, we thus highly recommend learning from and through indigenous forms of education and pedagogy.89 The United Nations Permanent Forum on Indigenous Issues (UNPFII) considers the term "indigenous" to refer to people who "self-identify as Indigenous and are accepted as a member of one or more Indigenous communities; have historical continuity with pre-settler societies, territories, languages, cultural practices and political systems; and "resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities" (UNPFII 2006, para. 3).90

The imposition of western models of education on indigenous communities have caused much harm in those communities, in addition to the violence inflicted upon many indigenous children who were forced into residential schools. Education for regeneration and thrivability requires a deep inclusiveness of indigenous community-based learning approaches. And also, the inclusion of indigenous peoples themselves, as we will elaborate on further in the next section.91

Applying a "commoning"92 approach to learning and collaboration also aligns well with the bioregional learning approach of section 8.2. Michel Bauwens, founder and president of the P2P Foundation, has pioneered peer-to-peer strategies and initiatives for many decades. He considers “the commons” as an emerging new paradigm and defines “commons” accordingly: "A commons is: 1) shared resources (i.e. there is something objective about it); 2) maintained or co-produced by a community or group of stakeholders (hence: a subjective activity and choice, ‘there is no commons without commoning’) and; 3) it is managed according to the rules and values of that community (‘autonormativity’), which makes it also an alternative governance and property regime."93

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88 It is worth exploring whether the tubular filaments or hyphae of the mycelium mimic in some ways the microtubule functions of the human brain, which according to Stuart Hamer
89 See also the work of Four Worlds International Institute.
90 For further UNESCO educational sources visit – https://uil.unesco.org/
91 See also The 2019 special issue of International Review of Education (65:1), “Indigenous knowledges as vital contributions to sustainability.”
92 Commons are goods, resources, and system values that are collectively used and collectively produced or generated. A school, educational institution, or learning community can be considered as a community of commoners. A commoning approach to education creates a more inclusive role for learners, and in particular students as co-creators of an co-determining curriculum and learning processes.
93 See https://wiki.p2pfoundation.net/Commons
Education as commoning, and future education as a commons, brings us closer to the collaborative attitudes that this section suggests for educational transformation through the mycelium approach. Yannis Pechtelidis and Alexandros Kioupkiolis describe commoning as a process of, “making the organization of education a common affair in which children, teachers, and parents co-participate, will be considered at two different but interconnected levels: the mode of governance and the educational practice,” (2020, p.2).

Another mycellium approach of collaborative and community-based learning is what is referred to as “rhizomic learning.” While it is beyond the scope of this section to explore each of these concepts in-depth, we mention it here for those who are interested to learn more about it. A rhizome is the root system of plants and trees. The rhizomic concept originates from the work of Deleuze and Guattari (1987), who used the word rhizome as a metaphor to describe non-linear and non-hierarchical forms of knowledge creation and sharing (Unander and Sørensen, 2020).

The landscapes and ecologies of learning have shifted radically in the last few years, and this will continue to change even more through disruptive technologies and disruptive events such as the COVID-19 pandemic and climate change disasters. Community learning capacities and resilience will make the critical difference for how people can pull together during those times, and in particular for how we learn to address the many challenges collaboratively.

By weaving the mycelia networks of future education, we can develop the root systems for a new paradigm in education that is inclusive of our diversity, and inclusive of indigenous wisdom. In the GEF Learning Ecosystems report, the role of weaving is emphasized as essential for developing our learning ecosystem capacities: “Weaving is an approach to leadership that relies less on hierarchical authority and centralised control, and more on curating circles, hosting conversations, and building trusted relationships. It involves taking the lead but, equally, empowering others to step forward and take the lead. Weavers talk about moving from ego to eco. Weaving is a complex and nuanced discipline that involves shepherding people from highly diverse institutions, roles, backgrounds and perspectives,” (Spencer-Keyse, et al., 2020, p.104). This Blueprint also serves as a first step towards this larger weaving, by extending the invitation for each of us to become a mycelium of future education.

We will complete this section with some further inputs by our working group members on this topic. Jennifer Browdy mentioned how: “A big problem in education are the siloed disciplines, which is repeated fractally from high-level research all the way down to K-12 classroom. In our ideal future destination, how can we nourish the mycelial networks at the root of all scholarship, such that we all thrive together?” Working group member Raz Godelnik replied: “Add the synthesis of community of learners and learning by doing, i.e. how learning becomes a core part of the fabric of the community and how learning is constructed around acting together, with a focus on the community it serves.”

Dave Pendle further mentioned how: “Emerging educational experiments that focus on amplifying collective intelligence in schools, reveal accelerated learning through shared social cognition. As structural separative barriers fall away in consciousness, learning energies can flow more feeling within the group in ground breaking ways.”
8.3.1 Including Indigenous Communities

“We are not, and can never be, lone individuals. We are the sum total of our actions as a species, and this is why we can leave nobody out. We, as a species, holding one part of the Hoop of Life, are responsible for upholding that part. If we do not, the Hoop begins to fail. The Hoop of Life does not understand “us and them,” the Hoop of Life only understands “We.””

~ Pat McCabe, Navajo Elder (in Anita Sanchez, 2017, p.165)

As mentioned in the previous section, inclusion of indigenous perspectives and people is essential for educational transformation.\(^94\) Mainstream education is still dominated by colonial narratives and worldviews. Furthermore, education for regeneration and thrivability requires a life centred and ecological awareness of our role, place, and identity as humans. Indigenous pedagogies and approaches have much to offer for developing our ecological literacies and life centered consciousness. In order to avoid cultural appropriation, and repeat the painful patterns of the past, it is essential that indigenous people themselves are included in the development and facilitation of curriculum about and for indigenous cultures, practices, and knowledge.\(^95\)

This point was also emphasized during a recent (March 2021) youth webinar series by UNESCO and the United Nations Office of the Secretary-General’s Envoy on Youth. During this webinar leaders and advocates of indigenous peoples’ rights explored how indigenous education and traditional knowledge contribute to more relevant and inclusive education.\(^96\) Their webinar also emphasized the need for intercultural education and language diversity, to make education more accessible to indigenous people and to learn about indigenous knowledge through the unique indigenous languages.

Learning as Community is at the heart of indigenous pedagogy and worldviews, as well as the foundation for an emerging sense of self and self-authorship (Jacobs, also known as Four Arrows, 2016). Yankunytjatjara elder Bob Randall (also known as uncle Bob), who served as a custodian of the Uluru cultural heritage in Aboriginal Australia, taught learning as community through their teaching of Kanyini. He explained how Kanyini is best expressed in English as the relationship between ‘responsibility’ and ‘unconditional ‘love’, an enormous caring with no limit. Kanyini, he further explained, comes from a deep sense of connectedness and relatedness with the whole family of life. Kanyini is based on four principles, which reveal the deeply intrinsic nature of learning as a community of life (Randall, 2015):

1. **Ngura** – A sense of belonging to the land that grows us up. To feel at home in nature.
2. **Walytja** – To connect with life as family. Our kinship relation with all the members of life, i.e. the trees, the animals, the rocks, the plants, all are family.
4. **Tjukurpa** – Creation period, or also called the dreamtime, and the right way to live. How we align our intentions, behaviours and actions with the universal principles and laws, and relate with this as the wisdom of life.

We will elaborate on these four Kanyini principles further as a foundation for Learning as Community. Starting with Ngura, land is seen as alive with spirit, stories, meaning, and family. It is the ground and foundation from where our kinship with nature and sense of family with all living things emerges. Ngura teaches us that nature is not a resource; it is a community to which we belong. Without a sense of Ngura, a sense of belonging to nature, we more easily feel alone, lost, and disconnected from each other and life. Ngura is essential for Learning as Community rooted in the ecology of life.

\(^94\) For example, see this educational resource “The Indigenous Learning App” by the World Literacy Foundation in Australia – [https://www.indigenous.app/].

\(^95\) UNESCO offers a whole range of indigenous teaching resources for education – [https://bit.ly/3IkK5r5]

\(^96\) To read the summary of their discussions visit – [https://bit.ly/36L9Eze]
The second principle, Walytja, emphasizes how our sense of community grows by realizing our kinship with life as family. The trees, four leggeds, winged ones, rocks, all become relatives with the human two leggeds. Through our sense of unity with life as family people also become more receptive to the spiritual nourishment that is referred to as the third principle, Kurunpa, which also means love, psyche, spirit and soul. Without Kurunpa our view of the world will become predominantly materialistic. Kurunpa introduces us to the spiritual and ecological values of Learning as Community.

The fourth principle, Tjukurrpa, enters us into the living cosmology of our universe and teaches us the sacred principles and universal laws that are also referred to as the Dreaming or Dreamtime. Tjukurrpa reveals the implicate architecture of life and the cosmological foundations for Learning as Community, and helps us become aware of the invisible world behind physical appearances.

Indigenous perspectives and teachings are also living transmissions of the ancient wisdoms of our ancestors, which continually renew by our enactment and engagement of this in the present and for future times. Learning for regeneration and thrivability requires also the deepest realization of how we are all indigenous to this Earth. And as Earthlings, it is within us to find the ways and resources to heal our precious planet and realize our membership within the community of life. Within all of us live the seeds of Indigenous consciousness, which naturally weaves the mycelia of our common belonging to this Earth, from which the root systems of future education can emerge and blossom.

8.3.2 Including Youth in Educational Transformation

“The prophecy of the seventh generation says that when the seventh generation of young people come, the great winter will end, for these young people with old spirits will lead and make change a reuniting with each other and with Mother Earth will happen.”

~ Anita Sanchez (2017, p.203).

WorldSkills and the OECD carried out a survey in 2019 with 15,000 youth aged 18-24 years old, from 19 “G20” countries. These survey outcomes were published in the “Youth Voice for the Future of Work” report, which revealed how: “Young people in most countries are not positive about whether school has helped prepare them for adult working life, but only slightly, with a wide range of opinions. The simple average across our countries reveals that 26 percentage points from young people are more positive than negative; dropping to only 20 percentage points more being positive among those who did not attend fee-paying secondary school.”97

The report further indicates how 44% of young people worry that there won’t be much demand for their skills and knowledge in the future. The conclusion from the report shows how many young people do not feel confident that their education prepares them for their future, which reveals another key reason why educational transformation is required in many different countries. However, to gain or restore the confidence of youth in their education it is essential that youth becomes a key driver for educational transformation.

The “School Strike for Climate” movement was started by Greta Thunberg in 2018 when she was 15 years old.98 She started this movement by skipping school to protest outside the Swedish parliament, calling on world leaders to wake up and take action for our planet and our future. Since then the School Strike for Climate actions have grown into a worldwide movement, also known as Fridays for Future (FFF), Youth for Climate, Climate Strike, and Youth Strike for Climate, mobilizing youth to skip classes as a way to demand action from political leaders to deal with our climate crisis.99

97 See – https://worldskills.org/what/projects/youth-voice/
98 https://www.bbc.co.uk/newsround/49405357
The 2021 UNESCO Berlin Declaration on Education for Sustainable Development indicates that: “Transformative learning for people and the planet is a necessity for our survival and that of future generations. The time to learn and act for our planet is now.” This Blueprint provides 7 Learning Perspectives for people and planet, which in order to become transformative also require direct engagement and inputs of youth. Article ‘f’ of the Berlin Declaration commitment further states:

“Empower young people as change agents for sustainable development, by creating opportunities for learning and civic engagement, and providing them with the competencies and tools to participate in ESD as co-creators of individual and societal transformation.”

~ 2021 UNESCO Berlin Declaration

Working group member Sophie Urmetzer also emphasized how, “Youth can be dynamic forces for transformation by working with their open minds and out-of-box thinking, and empowering their change agency.” Youth requires an active seat at the table when it comes to educational transformation, as well as curriculum creation for regeneration and thrivability. Finally, youth are naturally gatherers and know how to group as a community. Weaving the mycelia networks of future education starts by including future and younger generations in the acts of weaving and learning as a community – globally, bioregionally, and locally.

8.4 SUMMARY

Learning as Community

Through Learning as Community we explored three perspectives:

1. Becoming a Global Learning Community.
2. Bioregional Learning Communities.
3. Weaving the Mycelia Networks of Future Education.

Learning as Community through these three perspectives creates the root systems (the mycelia) for an emerging collective consciousness, and our collaborative capacities for maturing as a wiser species. These perspectives also remind us how educational transformation will only succeed when we become deeply inclusive of our diversity, and when our common care for life and the future generations becomes the unifying factor.

- The Learning as Community perspectives provide the necessary foundations for developing community based global consciousness that is life centered and future inspired, as well as for the development of collaborative capacities to become caretakers and stewards of our commons – our world and future.

100 In the sake of transparency, we had hoped to have more youth inclusion for the creation of this Blueprint. We did invite some youth representatives but did not receive sufficient input to coherently represent the youth perspectives for this Blueprint.
9. CONCLUSIONS AND RECOMMENDATIONS

“A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it.”

~ Max Planck

Thank you for having embarked with us through this Blueprint journey and our Sea Voyage to the land of thrivability. As with all transformative journeys, each completion is a new beginning. We complete this Blueprint by summarizing once more the 7 Learning Perspectives, and by offering 13 recommendations that you can apply in your life and share with your communities and networks. At the end of this chapter, we have shared one final practice for nurturing the seeds of new possibilities within you. We ask you to support this work by sharing this Blueprint far and wide, and by applying what resonates from this work in your own life and relationships.

9.1 SUMMARY OF THE SEVEN TRANSFORMATIVE LEARNING PERSPECTIVES

The 7 Transformative Learning Perspectives summarized below serve as essential foundations for learning for regeneration and thrivability, as well as for educational transformation. These perspectives have been carefully curated and woven together to support the deeper shifts in our consciousness, and to facilitate and support the required personal, systemic, and collective transformations of our worlds and cultures. We recommend exploring these multi-dimensional perspectives in learning conversations with others and for the redesign and transformation of our societal development – economically, educationally, politically, socially, and culturally.

1. Learning as Context – We explored the following three perspectives: The Anthropocene, the Noosphere, and A New Renaissance. Learning as Context through these three perspectives raises awareness about the root causes, necessity, evolutionary direction, and opportunities of our personal and collective transformation to regeneration and thrivability. By applying the Learning as Context perspectives in education, learning becomes more transformative and relevant while also inspiring hope that we can co-create a regenerative and thrivable world together.

   The Learning as Context perspectives serve as essential conditions and attractors for transformative learning, and inspire our personal and societal development towards regeneration and thrivability.

2. Learning as Life – We explored the following three perspectives: Three Evolutionary Principles of Life, Five Stages of Transformational Change, and Five Syntony Spheres of Evolutionary Learning Ecosystems. Learning as Life through these three perspectives reveals how learning and development is intrinsic to life and unfolds as a transformative and future creative process that we can apply in education, as well as for our societal development and species maturation.

   The Learning as Life perspectives provide the necessary foundations for developing our ecological literacies and ecosystemic capacities for regeneration and thrivability.
3. **Learning as Future** – We explored the following three perspectives: Cosmology of Futures, Imaginal Capacities, Futures Literacies. *Learning as Future* through these three perspectives offers an integral exploration of the presence of the future in each of us and how to engage this for evolving the systems and cultures of which we are a part. These perspectives also support us to develop our future literacies and become future creative, by developing our imaginal capacities and facilitation of death and transition, regeneration and healing, and birth and emergence.
   ○ *The Learning as Future* perspectives provide the necessary foundation for developing our future literacies and future creative imaginal capacities for regeneration and thrivability.

4. **Learning as Agency** – We explored the following three perspectives: Transformative Agency, Bildung as Stewardship, and the Governance of Agency. *Learning as Agency* through these three perspectives serves to guide the development of personal and collective stewardship capacities for regeneration and thrivability. This includes strategies and processes for how to embrace the growing pains and evolutionary tensions of transition times, including rites of passage, and how to transform dualistic barriers through third way evolutionary approaches. Moreover, the *Learning as Agency* perspectives also serve as conditions for learning how to work with complexity, and for developing a governance of agency for regeneration and thrivability based on interdependence and autopoietic principles.
   ○ *The Learning as Agency* perspectives provide the necessary foundations for developing our agency capacities for stewarding regeneration and thrivability.

5. **Learning as Connection** – We explored the following three perspectives: Learning as a Connective Pattern, Digital connections and the role of AI and VR, and Learning Feedback. *Learning as Connection* through these three perspectives serves as an essential inquiry into the future trends of education, including the role of digital technologies and tokenization. It also provides a deeper inquiry into the role of assessments and evaluation, and how to create meaningful feedback for the ecology of learning as a whole.
   ○ *The Learning as Connection* perspectives provide essential inquiries for developing our digital literacies, connective capacities, and regenerative feedback systems for creating thrivable learning systems.

6. **Learning as Story** – We explored the following three perspectives: Learning as Story in Place, the Mythic Structures of Learning, and how to create New Stories of Learning. *Learning as Story* through these three perspectives helps us become aware of the archetypal dimensions of our cultures, stories, and identities, and serves to develop our sense-making and communicative capacities. These perspectives are foundational for place-based learning and to foster a deeper sense of connection and belonging, and to prepare us in becoming story creators for regeneration and thrivability. Furthermore, these perspectives and practices serve to develop depth awareness and integral consciousness, and help to decolonize our stories and minds by facilitating learning dialogues for healing the pain and trauma of oppression, domination, and division.
   ○ *The Learning as Story* perspectives provide the necessary foundations for developing conscious communication, depth perception, and sense-making capacities and for becoming the story creators for regeneration and thrivability.
7. **Learning as Community** - We explored the following three perspectives: Becoming a Global Learning Community, Bioregional Learning Communities, Weaving the Mycelia Networks of Future Education. *Learning as Community* through these three perspectives creates the root systems (the mycelia) for an emerging collective consciousness, and our collaborative capacities for maturing as a wiser species. These perspectives also remind us how educational transformation will only succeed when we become deeply inclusive of our diversity, and when our common care for life and the future generations becomes the unifying factor.

- The *Learning as Community* perspectives provide the necessary foundations for developing community-based global consciousness that is life centered and future inspired, as well as for the development of collaborative capacities to become caretakers and stewards of our commons – our world and future.
9.2 KEY RECOMMENDATIONS

The following 13 recommendations summarise the essence of this Blueprint, and integrate the integral focus of the 7 Learning Perspectives. These recommendations are further contextualised in section 9.3 for the five ‘audiences’ or integral levels of learning from nano to micro, meso, macro, and supra. We have also added the key Learning Perspectives that these recommendations relate to.

1. **Listen to the feedback of life and our planet** – We have brought our world to the brink of collapse because we don’t listen to the feedback of life and our planet. Listening goes much further than hearing or knowing; true listening is responsive and in-forms the appropriate actions. Learning for regeneration and thrivability begins by including feedback of the living systems of which we are a part, and this also includes the ecologies of life within and around us (see Learning as Context, Learning as Life, Learning as Connection, Learning as Story, and Learning as Community).

   - We recommend incorporating the feedback loops of living systems in the design, governance, and learning processes of our educational, economic, and governance systems. We further recommend bringing nature into our classrooms and learning spaces, and to bring people into nature to learn from life and become more self-aware.

2. **Address systemic thrivability barriers** – By ignoring the feedback of life and our planet and by pursuing growth at the cost of life, we as a species have become a systemic thrivability barrier for our planetary wellbeing. Learning for regeneration and thrivability requires preparing people to resolve these systemic thrivability barriers from their root causes, and needs to guide people in the principles and practices for growth and development that is evolutionary coherent with life (see Learning as Life, sections 3.2.2 and 3.2.3).

   - We recommend making systemic thrivability barriers visible within and through education by developing indicators, feedback loops, system maps, and sensing capacities for revealing when and how systemic boundaries are harmed, and by developing our capacities for evolutionary coherent growth and development.

3. **Provide transformative learning contexts** – Many educational programs and pedagogies fail to provide the appropriate contexts for developing an integral understanding of our roles and responsibilities, and do not sufficiently empower people in becoming co-creators of our worlds and future. Furthermore, education for sustainability does not sufficiently contextualise the development of capacities for regeneration and thrivability. Learning for regeneration and thrivability requires transformative learning contexts for conscious agency, and needs to reveal the necessities as well as opportunities for our personal and societal transformations (see Learning as Context, Learning as Life, Learning as Future, Learning as Connection, Learning as Story, and Learning as Community).

   - We recommend including the Anthropocene, Noosphere, and Renaissance as integral contexts for transformative learning and how to act on this personally, with others, as organisations, and as local, bioregional, and global learning communities.

4. **Facilitate learning as a process of life** – Many educational programs impose learning goals and objectives that restrict people’s holistic development and create further disconnections from life. Learning for regeneration and thrivability requires process-based and life-centered goals and pedagogies, and facilitation for experiential understanding of the fundamental conditions for planetary health and wellbeing (see Learning as Life, Learning as Future, and Learning as Community).

   - We recommend applying the three evolutionary principles of life and five stages of future creative transformation to the design and facilitation of education, and to scale this through the five syntony spheres for becoming evolutionary learning ecosystems.
5. **Imaginably explore our future potentials** – Many mainstream educational programs prioritize academic abilities at the expense of imaginal capacities through rigid educational goals. Learning for regeneration and thrivability requires holistic development of our human capacities, including the development of essential imaginal capacities and future literacies through which we learn how to regenerate, transform, and redesign our worlds and cultures for thrivability [see Learning as Life, and Learning as Future].

   - We recommend developing our imaginal capacities and future literacies through formal and informal education, and enable exploration of our future potentials by making it possible for people to evolve and transform the systems, relationships, goals, and environments that they form part of.

6. **Develop future creative learning systems** – Many educational programs and systems reinforce the patterns and attitudes of the past and sink us deeper into trajectories of systemic collapse. Learning for regeneration and thrivability requires learning systems that are future creative and possibility increasing. If learning does not become future creative, the human experiment may soon end [see Learning as Context, Learning as Life, and Learning as Future].

   - We recommend transforming all educational systems that by design inhibit or block the development of future creative capacities for regeneration and thrivability. This also includes an honest review of systems that require death, and how prior resources can shift to new and emerging systems that are more suitable or future-fit. We further recommend actively empowering learners to develop their future creative capacities for a thrivable world that works for all.

7. **Design for regeneration and thrivability** – Many educational systems are designed for unsustainable human development, enforcing rigid targets and goals that drive us further into collapse. Learning for regeneration and thrivability requires design for evolutionary coherent growth and development that is responsive and in tune with the flows and dynamics of life [see Learning as Context, Learning as Life, Learning as Future, Learning as Agency, and Learning as Connection].

   - We recommend redesigning and repurposing the goals and resources of education in service of life and a thrivable future. This includes a major re-prioritisation of the role and purpose of education, as well as the (re)design of educational systems for regeneration and thrivability.

8. **Initiate and nurture third way approaches** – Many educational programs and cultures do not sufficiently prepare learners to work with the multiple evolutionary tensions, paradoxes, and complexities of this tipping point time. Learning for regeneration and thrivability requires awareness of dualistic stances and how to address polarizing dynamics with the capacities for facilitating third way approaches and strategies that can heal the divides, and transform duality traps [see Learning as Context, Learning as Life, Learning as Agency, and Learning as Story].

   - We recommend including third way approaches and strategies for creating the evolutionary learning spaces through which polarising dynamics can heal, integrate, and transform. We further recommend the development of third way perspectives and facilitation capacities to transform the multiple duality traps that are at the root causes of our current sustainability crisis.
9. **Empower collaborative agency** – Many educational programs foster competitive attitudes and expectations, which hinder the development of our collaborative agency. Learning for regeneration and thrivability empowers collaborative capacities and agency, at the personal, collective, as well as systemic domains of life and society [see *Learning as Life, Learning as Agency, and Learning as Community*].
   ○ We recommend developing collaborative capacities and agency through a stewardship and Bildung approach of education, linked with access to governance and coordination tools, technologies, and systems that can implement and scale our collaborative agency for regeneration and thrivability.

10. **Communicate patterns that connect** – Many educational programs and institutions communicate from the patterns of mechanistic systems and old paradigm goals and worldviews, which forms an educational language of exclusivity, competition, and comparison. Learning for regeneration and thrivability requires communicative patterns that connect us to each other, life, our planet, and the larger realities of which we form part [see *Learning as Life, Learning as Agency, Learning as Connection, Learning as Story, and Learning as Community*].
   ○ We recommend learning how to become and communicate like a mycelium, for becoming the new stories of education, and by communicating patterns and narratives that connect, inspire, and form the root systems of the future civilisations of a thriving world.

11. **Act as a thrivable learning community** – Many educational institutions focus only on their own narrow goals, without seeking to form the larger learning communities our world and planet needs. Learning for regeneration and thrivability requires that we become learning communities – locally, bioregionally, and globally – which put life in the centre and our planetary wellbeing as a shared priority, with a long-term commitment to our common futures [see *Learning as Agency, Learning as Story, and Learning as Community*].
   ○ We recommend that you as the reader do whatever you can to act from the principles and practices of being a thrivable learning community. To embody this in your consciousness, relationships, and actions. And to act as if this thrivable future already exists now.

12. **Celebrate the rites of passage moments** – Many of the mainstream educational rituals focus predominantly on the rites of passage of academic achievements, with little acknowledgement of who we are becoming as people. Learning for regeneration and thrivability is a journey that requires awareness of and support through major transition times – personally and collectively – and knowing how to work with the transformative powers of life through the various phases of death, conception, birth, and maturation [see *Learning as Agency, section 5.2.2*].
   ○ We recommend including rites of passage journeys and celebrations for developing our regenerative capacities and thrivability consciousness through all stages of learning and education, starting with early-childhood. We further recommend intercultural and interfaith exchanges of rites of passages, and to introduce children and youth to a multi-cultural and transgenerational understanding for how we can together acknowledge and celebrate the joyful as well as the painful transition moments, including birth and death.
13. **Invest in the future of life and a thriving world** – Many educational programs and institutions do not sufficiently invest in developing humans that are capable of becoming wise stewards of our collective commons. Learning for regeneration and thrivability is an investment in the future of life and a thrivable world, which requires that we become wise Earth citizens ([see Learning as Context, Learning as Future, and Learning as Community](#)).

- We recommend transforming education as per the guidance and criteria of this Blueprint, and to initiate learning for regeneration and thrivability at all levels and stages of education. Finally, we recommend that you as the reader invest in your continual development by applying the many practices and inquiries that form part of this Blueprint and by joining us on the voyage to the land of thrivability. Only together will we be able to find our ways through the many challenges that are coming and become the land of thrivability.

### 9.3 APPLICATION THROUGH SELF EVALUATION

To complete this Blueprint, we offer the following matrix for applying the 13 recommendations of the previous section to the 5 levels of learning from chapter 0 – nano, micro, meso, macro, and supra. A brief summary of these 5 levels is provided here below again.

1. **Nano level – self and family**: Learning is focussed on self-awareness and personal development as well as the development of interpersonal relationship skills at the level of family.

2. **Micro level – community learning**: Learning is focussed on community consciousness, collective intelligence, and development of community capacities. With ‘community’ we mean groups and collectives of people in a given surrounding or virtually or online, who share common connections and purpose, including organisations, networks, and commons (whether centralized or decentralized).

3. **Meso level – bioregional learning**: Learning is focussed on bioregional and ecological contexts, as well as emerging meso patterns of decentralized self-organization. The bioregional focus transcends the rigid boundaries and regulations of nation-states that are still predominantly focussed on coordinating and distributing education through public authorities and registered agencies with formal curricula and standardized testing.

4. **Macro level – planetary learning**: Learning is focussed on planetary learning, which is not the same as international learning or global learning. Planetary learning develops planetary consciousness by focussing how we can co-learn and co-evolve with Gaia. Furthermore, planetary learning emerges through bioregional collaborations that scale and network to form a larger collective ecology of learning.

5. **Supra level – cosmological learning**: Learning is focussed on the universal or cosmic dimensions of our developing human consciousness. At the supra level of learning we focus on what it means to grow more fully into our human potentials within the larger universal contexts of being. We now become aware of the cosmic or implicate orders of consciousness within nature and all living systems and the prior unity of life. The distinctions between nano, micro, meso, and macro start to fall away as we become aware how each is nested within one another as an unfolding spiralling process that is continuous and integrative.

As mentioned previously, we purposefully chose not to create a Blueprint that is only outcome or solution-oriented, and instead opted for a more transformative inquiry-based approach. Accordingly, we complete this Blueprint in the same spirit by inviting you to now apply the recommendations of section 9.2 to your own life. We highly recommend to go through the 4 steps below as an inquiry-based exercise, and to do so together with another person or a group of people.
● STEP 1 – Assess the extent to which you live and apply these 13 recommendations via the matrix of table 5 below. Give yourself a rating from 0-3, with 0 meaning no application, and 3 meaning maximum application.

● STEP 2 – Assess your thrivability commitment by asking someone else who knows you well to assess you, using the 0-3 score. For example, ask this person(s) whether according to them you listen to the feedback of life and our planet at the level of yourself and family, and same for community, bioregion, planet, and the cosmos or universe.

● STEP 3 – Compare the two scores, the one you gave to yourself and the one other(s) gave you. Explore the difference and how you can bridge the gaps – if needed, by further developing your capacities for regeneration and thrivability.

● STEP 4 – Explore how you can support the recommendations and transformative Learning Perspectives of this Blueprint to be shared with the wider world.

Table 5. Thrivability Matrix Assessment for evolutionary learning and development

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<tr>
<th>Recommendations</th>
<th>Self &amp; Family</th>
<th>Community</th>
<th>Bioregional</th>
<th>Planetary</th>
<th>Cosmic</th>
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<td>1. Listen to the feedback of life and our planet</td>
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<td>2. Address systemic thrivability barriers</td>
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<td>3. Provide transformative learning contexts</td>
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<td>4. Facilitate learning as a process of life</td>
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<td>5. Imaginally explore our future potentials</td>
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<td>6. Develop future creative learning systems</td>
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<td>7. Design for regeneration and thrivability</td>
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<td>8. Initiate third way approaches</td>
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<td>9. Empower collaborative agency</td>
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CONCLUSIONS AND RECOMMENDATIONS

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<th>Recommendations</th>
<th>Self &amp; Family</th>
<th>Community</th>
<th>Bioregional</th>
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<tr>
<td>10. Communicate patterns that connect</td>
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<td>11. Act as a thrivable learning community</td>
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<td>12. Celebrate the rites of passage moments</td>
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<td>13. Invest in the future of life and a thriving world</td>
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9.4 LINKS AND RESOURCES

The following links and resources were gathered from various members of the working group, some of which serve as case-studies whereas others can serve as further connecting points for application and collaboration.

- The Global Education Futures forum.
- Home for Humanity and the Humanity Charter.
- EARTHwise Centre – Thrivability Education Program.
- The Earth Regenerators – A Study Group for Restoring Planetary Health and Avoiding Human Extinction.
- Gaia Education – Design for Sustainability.
- Global Ecovillage Network.
- Will Varey: “An inquiry into learning to discover the learning needs of a changing humanity as it learns about itself” – http://www.apithology.com/
- Violeta Bulc of Slovenia and hwe InCo Movement.
- Stefan Blachfellner – The Change The Game Initiative.
- Initiative of the International Society for the Systems Sciences (ISSS) for scaffolding a World Evolutionary Learning Tribe (WELTribe) for planetary thrivability and their 22nd European Meeting of Cybernetics and Systems Research (EMCSR).
- SEEDS Library for regenerative renaissance tools and education.
- FabLabs.
- Design Network for Social Innovation and Sustainability.
- Campus Co-Evolve – Integral Learning initiative for shifting participants from a community of learners to a community that learns.
- Foundation for Contemplation of Nature (India).
- Habits of Mind Education.
- Mindful Schools
- Garden story for regenerative learning.
- Keen School, providing an education related to preserving a child’s innate ability to learn.
- Weaving Labs – Evaluating the intangible aspects of learning into an evaluation framework Weaving Standards.
CONCLUSIONS AND RECOMMENDATIONS

9.5 THE SEA VOYAGE CONTINUES...

Thank you for completing this Blueprint and the time you have made available to go through the vital reflections offered here. Our Sea Voyage to the land of thrivability continues. We have not yet reached the harbour of this mysterious destination, and there are days when it seems like our destination almost appears unreachable. Especially when we realize how many planetary tipping points have already been set in motion, and the massive inertia in our political and economic systems to shift trajectories. And yet, we choose to complete this Blueprint with a message of active hope for nurturing in you the future potentials of an emerging new era.

New possibilities have a way of announcing themselves during the heart of darkness, just before dawn when it feels like the light has receded, and everything appears to become impossible. We are living through the ending of one major cycle and the beginning of another. We are in transition times between two eras, and not just in a climate or sustainability crisis. We offer the following passage of a dialogue and practice between Verdandi and her granddaughter Rose, from "The Quest of Rose" by Anneloes Smitsman and Jean Houston. Explore this practice to further activate and nurture the emerging new insights and realizations within you:

"Now become aware of the new era, born from a future possibility of higher orders of reality that more directly manifest the Cosmic architecture of consciousness," Verdandi continues. "The new era brings the possibility of new growth patterns that are based on wholeness, unity, evolutionary diversity, collaboration, co-creation, and partnership with the Universe. These future possibilities are already dormant within us, like the imaginal discs that contain the genetic codes for the butterfly body in the skin of the growing caterpillar. Reflect on how the future codes of this new emerging era live in you. Which of these codes have already activated, and which are activating now? Just be present to what emerges as you ask yourself these questions. There’s no need to answer me here. Verdandi pauses for a few minutes to give Rose the space to be with whatever emerges in her awareness. “Ready to continue?”"

“Yes,” says Rose.

“Good. Reflect now on what it means for you to be part of both worlds. How do you support this transition to a new era? Connect with your readiness for becoming a future human. Do you realize how incredible it is to be born in this transformational time where you actually get to see these changes in what becomes possible and is made real? The old era of the caterpillar world of human consciousness has reached its stage of completion. As you know, we simply cannot continue the old growth patterns any further. If we do, we’ll trigger mass extinction events, which is a clear sign that life is saying, ‘Wise up! Time to change!’"

“Take a deep breath and relax. Let go of the outer world. Bring your awareness back to yourself. Breathe in and out. Be present in the here and now. Feel your body and relax your mind.

“Connect with your imaginal powers and feel how this naturally activates your Cosmic awareness. You are now able to sense, see, feel, hear, intuit, and receive information that originates beyond your ordinary state of mind. Your Cosmic mind is present within your local awareness, providing you with direct access to your imaginal capacities."
“Bring your awareness to your future human codes of consciousness; your potentials from this new, emerging era. Hold the intention that these codes now start to activate further inside you. You may experience this as a warmth spreading through your body, tingling sensations, a deep intuitive knowing, a sense of joy and wonder, or perhaps even a smile on your face.

“Your butterfly potential is now activating further through new codes that hold the possibilities for whole new patterns of growth and evolution; a whole new stage of our human evolution and the mythic structures for further developing our future human potentials. Welcome these new mythic structures and the archetypes that guide these fresh possibilities. Feel the activation of your future human codes. Feel a whole system of support emerge and open up for you.

“You now have access to whole new abilities, perspectives, realizations, and ways of being that may be beyond anything you have ever imagined or experienced before. Allow the newness of what is happening inside you. Don’t project old thoughts or concepts on this experience, just let it grow into new experiences that directly emerge from your future human codes.

“Welcome your metamorphic transformation of consciousness, as earlier and older forms of yourself become supportive of this new stage in your development. Thank your caterpillar self for how it carried your future human potential until the time you were ready to embrace it, providing the context for the necessity of change.

“Acknowledge and thank yourself for being ready for what is happening now. Enjoy this new phase and the birth of this new era in you.”

~ Anneloes Smitsman & Jean Houston (2021, p.185).¹⁰¹

¹⁰¹ See https://www.futurehumans.world/
10. GLOSSARY

Allocations – Fair, just, and proportionate shares of responsibility, applied at sub-system levels (i.e., organizations, portfolios, regions, etc...), for respecting sustainability thresholds (see thresholds below).

Archetype – A common pattern of behavior that reveals the deeper systemic structures, templates, or codes for the way things form, grow, develop, and evolve. An archetype can also be a psychic or cultural pattern that animates the behavior of a person or a collective of people.

Autopoiesis – The process by which a living system can self-create, self-regulate, and adapt its environment and structures, and in such ways that support its thrivability.

Bildung – A Germanic concept that is often translated as education, yet implies much more than merely education and cannot be directly translated into one English word. Bildung expresses an approach to the foundations of human development as an organic realisation and actualisation process that have disappeared from many of the conventional educational systems.

Complexity – A nonlinear state of connectivity that emerges from the multiple levels of interdependent connections and relationships. Not to be confused with "complicatedness," which refers to a situation or event that is not easy to understand.

Cosmos – From the Greek word "Kosmos," which means "ordered whole" and is also used to refer to the Universe as an orderly, harmonious living system.

Cosmic Architecture – The innate holographic structures, codes, and archetypes of information that shape and influence the way our physical universe forms, grows, and evolves [see also Implicate Order, and Information].

Cosmic Hologram – Based on emerging research in physics which suggests that the Universe is a Cosmic hologram because it is informationally unified at all levels and scales of existence [see also Implicate Order, Information, and Holographic Principle].

Ecological – Network of relationships between living organisms and their environments.

Ecosystem – A complex network of interconnected living system(s).

Environment – The context within which a system exists, lives, participates and evolves. It can also refer to our natural world.

Evolution – An emergent process of learning and development from the tiniest pixels to the larger realities of stars, planets, and each of us, which unfolds via increasing embodied complexity and deepening evolutionary coherence [see also Complexity, and Evolutionary Coherence].

Evolutionary Coherence – A dynamic state of harmonic resonance and spontaneous collaboration between the diverse elements and relationships of complex living systems. A natural state of attunement to the innate wholeness and unity of life [see also Evolution].

Fractal – Infinitely complex patterns that repeat in a self-creative and self-replicating manner through all dimensions of life. We can discover fractals in the ways flower petals grow and open as unfolding spirals, as well as in the growth patterns of trees and weather patterns. The Cosmic architecture of life is fractal [see also Cosmic Architecture, and Cosmic Hologram].
**Future Creative** – The ways in which our learning and development creates the conditions for the actualisation and emergence of (new) future possibilities.

**Holographic Principle** – A principle in physics that suggests how the appearance of our physical universe as a three-dimensional space originates from a two-dimensional holographic surface or boundary that is mathematically (informationally) encoded at the smallest level of physical reality [see also Cosmic hologram].

**Holonic** – Based on the terms “holon” and “holism”, which describe how each whole element within life (a holon) is always part of a larger wholeness at deeper orders of reality.

**Imaginal** – A future creative state of consciousness that extends beyond the “imaginative” and connects us with the transformative powers of the Universe in the way we think, perceive, and respond.

**Implicate Order** – A term coined by physicist David Bohm to explain how the physical Universe is part of an undivided holographic wholeness of consciousness, and emerges from more fundamental implicate orders or structures of reality that precede space-time [see also Holographic Principle].

**Information** – The primary entity from which physical reality is constructed, and also the building blocks of consciousness. Life is informationally unified, which suggests that both energy-matter and space-time are complementary expressions of information.

**Mechanistic System** – Commonly used to refer to machine-like systems that are fundamentally different from biological living systems. Can also be used to refer to human-made systems that have been developed through mechanistic thinking and mechanistic sciences, which is the context in which it is applied in this Blueprint.

**Nonlocality** – A principle of quantum physics which Albert Einstein referred to as “spooky action at a distance.” Classical physics suggests that physical reality is local, which means that a measurement at one point in space cannot influence what occurs at another point in space, if the distance between the points is large enough. However, quantum physics predicts that physical reality is essentially nonlocal, which means that under certain conditions, a measurement of one particle will correlate instantaneously with the state of another particle, even if the physical distance between the particles is many light-years away. Nonlocality thus suggests that particles at more fundamental levels of reality are informationally correlated. We also use the concept of nonlocality to refer to unity states of consciousness and our creative partnership with the Universe [see also Holographic Principle].

**Protopia** – Provides practices, pathways and designs for a desirable future that can be realized with the conditions and potentials available to us now. Different from a utopia, which can only be approached asymptotically but never reached.

**Regeneration** – The act of improving and enhancing a place, system, or relationship with the healthy flows and thrivable conditions for life.

**Renaissance** – A period of significant rebirth, regeneration, and transformation that is often preceded by periods of collapse and crises.

**Superposition State** – A quantum realm of potentiality where all possible states simultaneously co-exist prior to being observed.

**Sustainable development** – A process of development (individual, societal, or global) that meets the needs
of present generations without compromising the ability of future generations to meet their own needs. Sustainable development safeguards the Earth’s life-support systems and threshold boundaries on which the welfare and wellbeing of current and future generations depend.

**System** – A group of interacting or interrelated elements that form a complex whole, which is delineated by its boundaries and surrounded by its environment.

**Systemic barrier** – Emerges from imposed goals and dynamics that harm the evolutionary coherence and systemic interdependencies of a living system, which dualistically polarizes the systemic complexity and undermines the thrivability of a system as a whole.

**Systemic Boundaries** – Emerges from the evolutionary coherence of a living system and safeguards the systemic interdependencies in service of the thrivability of the system as a whole.

**Thresholds** – Boundary conditions that delineate between sustainable and unsustainable ecological and social systems; in particular, crossing thresholds can trigger irreversible tipping points where systems “phase shift” in nonlinear ways into new system conditions.

**Thrivability** – Our innate ability to develop our capacities and actualize our potentials in ways that are generative, life-affirming, and future creative.

N.B. This glossary is based on glossaries of publications from Anneloes Smitsman and additional input from r3.0.
11. REFERENCES


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12. ANNEXES

12.1 ACKNOWLEDGEMENTS

r3.0 started this project at the worst of all possible times, October 2020, when COVID-19 hit the world hard. Many of our working group members went through a rough time, same as we at r3.0. Nevertheless, what you now hold in your hands or read on your laptops or computers, is a labour of love. Working group members put precious time into this project in an in-kind way. They engaged in a literature review, two online working group meetings, and an online virtual dialog on Currnt. This Blueprint, released in September 2021 at the 8th International r3.0 Conference, is the best we could come up with, and we believe it is a formidable piece of work.

This Blueprint would not be what it is without the tireless work of its Lead Author, Dr. Anneloes Smitsman. Pulling from her rich experience, based on her Ph.D. research, and her work at EARTHwise Centre, she articulated, shaped and fine-tuned this Blueprint from Day 1 onwards, and up until the last minute before it needed to go to the designer. We at r3.0 are deeply impressed by the amount of extra work, extra hours and extra writing Anneloes added above and beyond duty. Anneloes is a wonderful Positive Maverick, and r3.0 owes her a lot achieving this result. May it all resonate well with all of its readers, and may it lead to a lot of follow-up conversations, r3.0 test labs, and more written content and projects that will pick up the great ideas and guidance of this Blueprint.

12.2 ABOUT THE AUTHORS

Anneloes Smitsman, Lead Author. Founder and CEO, EARTHwise Centre

Dr. Anneloes Smitsman (Ph.D., LLM), is a visionary scientist, published author, futurist, system architect, and leadership catalyst for the transition to a Thrivable Civilization. She is Founder and CEO of EARTHwise Centre and holds a Masters degree in Law and Judicial Political Sciences from Leiden University, the Netherlands, and a degree of Doctor from the Maastricht Sustainability Institute (formerly ICIS), Maastricht University, the Netherlands. Her groundbreaking Ph.D. dissertation Into the Heart of Systems Change, addresses how to diagnose and transform key systemic barriers of our world crisis through its proposed Transition Plan for a Thrivable Civilization.

Anneloes is the co-author of the #1 Amazon International Bestseller The Quest of Rose, the first book of the Future Humans Trilogy with Dr. Jean Houston, and is the author of the Amazon International Bestseller Love Letters from Mother Earth – The Promise of a New Beginning, as well as many scientific articles and chapters in international peer-reviewed journals and books.

Anneloes is the lead architect of the EARTHwise Tipping Point System, the lead author of the r3.0 Educational Transformation Blueprint, an architect of the SEEDS Constitution and serves as architect and researched for SEEDS and Hypha for co-developing the Regenerative Renaissance tools, currencies, systems, and cultures. She is a member of the Evolutionary Leaders Circle of the Source of Synergy Foundation.
**Bill Baue, Co-Author. Senior Director, r3.0**

As an internationally recognized expert on Sustainability Thresholds, Thriveability, and Online Stakeholder Engagement, Bill Baue catalyzes systemic transformation. As a serial entrepreneur, he has co-founded several social enterprises: r3.0, Sustainability Context Group, ThriveAbility Foundation, Sea Change Radio, and Current.

Baue currently serves as Senior Director of r3.0 (Redesign for Resilience & Regeneration), a not-for-profit common good that networks a global community of Positive Mavericks focused on transcending incrementalism to trigger necessary transformations that enact living systems principles. In this role, he serves as the Systems Convener for the Connecticut River Valley Bioregional Collaborative of the Capital Institute’s Regenerative Communities Network. He also serves as the Convener of the Measurement Scorecards workstream of the Transformations Systems Working Group.

Baue has worked with prominent organizations across the sustainability ecosystem, including Audubon, Cabot Creamery Coop, Ceres, GE, Harvard, International Integrated Reporting Council, several United Nations agencies (UNCTAD, UNEP, UNGC, UNRISD), Walmart, and Worldwatch Institute. He serves on the Board of Co-op Power, the Technical Advisory Group of the Science Based Targets initiative, and as Senior Advisor to Preventable Surprises.

He lives near the Connecticut River Valley bioregion, where his daughters Clara, Emma, and Aoife periodically visit. He is a diehard Deadhead who enjoys camping, hiking, kayaking, yoga, meditation, and dancing contact improvisation.

**Ralph Thurm, Co-Author. Managing Director, r3.0**

Ralph Thurm is one of the leading international experts for sustainable innovation and strategy as well as sustainability and integrated reporting. He is co-founder and Managing Director, content curator and facilitator of r3.0, worked as Director of Engagement for GISR and co-founder of the ThriveAbility Foundation. Earlier, Ralph Thurm held positions as Head of the Sustainability Strategy Council at Siemens, COO of the Global Reporting Initiative and Director of Sustainability & Innovation at Deloitte. Ralph was involved in the development of all four generations of the GRI Guidelines. Furthermore, Ralph works in and supports many networks for sustainable innovation as a valued partner and is a member of various Boards and Juries. His early blogging as A|HEAD|ahead on Wordpress has been a respected source and input for many international discussions. He now posts articles as ‘The Lighthouse Keeper’ on Linkedin (to be found on Ralph’s Linkedin profile).

Ralph is a hardrocker, plays guitar and loves a lot of distortion. Sustainability and rock’n’roll both ask for revolution, being rebellious is in Ralph’s genes. Connecting sustainability and economy, having studied micro and macro-economics in the late 80’s of the last century, needed an activist and rebel approach to swim against the mainstream ignorance of the concept of sustainability. In all his business life Ralph looked for the big wide openness of new and innovative approaches to sustainability.
12.3 WORKING GROUP MEMBERS


12.4 PROJECT SPONSORS

This project was sponsored by r3.0 from its own reserves. During the COVID-19 pandemic it was literally impossible to get focused attention of potential funders to this important project. Nevertheless, we thought we should not delay this important piece of work.

12.5 ABOUT R3.0

r3.0 promotes Redesign for Resilience and Regeneration. As a global common good not-for-profit platform, r3.0 crowdsources open recommendations for necessary transformations across diverse fields and sectors, in response to the ecological and social collapses humanity is experiencing, in order to achieve a thriving, regenerative and distributive economy and society. Website: https://www.r3-0.org/
APPENDIX I

Examples Global and Bioregional Learning Communities

The following examples were provided by working group member, Prof. Dr. Alexander Laszlo, to illustrate emerging or proto-ELEs in Latin America:

**Bolivia** – [https://pedagooogia3000.info/](https://pedagooogia3000.info/):
Pedagooogia 3000. This education initiative is based on the vision of a world in balance, populated by fully actualized human beings, who lovingly care for their individuality and their home, co-creating and enjoying a new society in sustainable communities, and respectfully co-caring for the Planet. Their Education 3000 Network invites collaboration with similar organizations, creating synergy through exchange and a support among all the partner groups.

**Colombia** – [https://fundacionmisangre.org/en/](https://fundacionmisangre.org/en/)
Fundación Mi Sangre. FMS's purpose is to activate ecosystems and develop capacities in order to allow new generations to be protagonists in the creation of a culture of peace in Colombia. Their work is based on a systemic approach at multiple levels. At the first level, they focus on fostering individual changes by working with children and at risk youth, with the participation of principals, teachers and families). At the second level, they aim to bring about community changes with at risk youth. At the third level, they seek for changes in society, working with young people who are leading peacebuilding initiatives to mobilize others and influence the public agenda. Lastly, at the fourth level, they aim to bring about changes systemic by aligning and fostering collaborations with other public and private initiatives.

**Colombia** – [https://opepa.org/](https://opepa.org/)
OpEPA. This organization works in three main areas: education, communication for regeneration, and public policy advocacy. OpEPA's approach to nature-based education follows regenerative and living systems principles weaving non-conventional actors and learning environments into learning experiences that foster ecosystemic and regenerative mindsets based on interdependence and interrelations (within living systems) and the re-establishment of healthy relations with one self, others, and nature.

**Colombia**
Social Lab – GAIA Hub Medellín. The Social Lab Medellín seeks to appeal to collective intelligence in recognition of the global crisis that we are currently living through. It offers an opportunity to reconfigure ourselves as a society by building more supportive, collaborative and inclusive learning systems. To this end, they have generated "Circles of Solidarity", which are self-managed exchange groups of participants who make possible the activation of collective intelligence, generating a space to sense into what is emerging.
TAAP – Learning Workshops for Arts and Thought. This initiative consists of community intervention projects and training programs that have direct impact on children, youth, parents and teachers. These programs form the pragmatic basis for the formulation of solutions to the problems of violence in their communities. Projects include Aid Live which is formed by a group of social development specialists with more than ten years of experience working with communities in Venezuela and Colombia. This project focuses on ensuring the proper use of resources and the impact of projects such as Venezuela Live Aid.

Skilling for Sustainable Tourism. This program focuses on accelerating lifelong learning to shape a sustainable travel and tourism industry. Through capacity building of government education actors and other education actors in the global South, this program provides technical assistance from local and international experts. By connecting these actors in the global South with each other, and connecting actors in the North with actors in the South, this program facilitates knowledge exchange between partners with a similar mission.

Guatemala  –  https://wiconnect.iadb.org/osc/asociacion-estrella-de-mar/
Asociación Estrella de Mar. This organization’s mission is to empower women through innovation and access to greater opportunity. Their vision is to foster a generation of women leaders for an equitable society. They do this through local leadership, empathetic innovation, and commitment to unleashing women’s potential. Based out of Panajachel, Guatemala, Estrella de Mar empowers a new generation of “Young Stars” who lead self-determined lives and inspire others to do the same.

Guatemala  –  https://www.facebook.com/lasonrisadelnino
Fundación Poulias. La Sonrisa del Niño is the association that has been created by people who love summer camps, promote values of solidarity, coexistence and volunteering. Unfortunately, on 3 June 2020, La Sonrisa del Niño’s Board of Directors decided to suspend their Motril 2020 Summer Camp. They hope to take up operation again before the end of 2021.

México  –  https://redesdetutoria.com
Mentoring Networks. These networks consist in rebuilding the relationships of learning in public schools through tutoring relationships, where dialogue between tutor and apprentice generates a democratic environment in which the objective is learning to learn. In addition to promoting the personal and academic development of the apprentices and tutors, the purpose of Mentoring Networks is to foster relationships that transcend the school by contributing to the transformation of the educational culture and social development of the country.
México – https://www.uaedu.edu.mx/
UAE. Through a relationship between Mexico and Canada, the Albert Einstein University uses a learning network to promote the process of actualizing the potential of the human being, which includes the progressive individuation that occurs from childhood to adulthood, as well as the expansion of consciousness leading to reintegration with the Self.

México – https://umamexico.com
UMA. The University of the Environment (Universidad del Medio Ambiente or UMA) is the only university in México specialized in sustainability, and the only unique space to promote projects of socio-environmental impact. They recognize the enormous importance of creating a space for learning that deals with the social and environmental challenges in Latin America. To address this challenge, they have been joined by hundreds of specialists, educators, change agents and entrepreneurs for the development of an educational model that provides the know-how to redesign our system.

Peru – https://www.innovaschools.edu.pe/propuesta-educativa/pilares/
Innova Schools. This multistakeholder initiative is focused on cultivating a collaborative blended-learning model of education. Innova now impacts over 42,000 students in Peru, with a goal to reach 60 schools and 50,000 students by the end of 2020. In order to focus on student-centered blended-learning, they leverage technology for independent study and teacher-facilitated project-based small-group learning.

Spain – https://www.ierarn.org/collaboration
iEARN. The International Education and Resource Network (iEARN) is dedicated to creating a global community of learners through virtual cultural exchange. It is made up of over 30,000 schools and youth organizations in more than 140 countries. iEARN empowers teachers and young people to work together online using the Internet and other new communications technologies. Over 2,000,000 students each day are engaged in collaborative project work worldwide.

Spain (Catalunya) – https://fundaciobofill.cat/fundacio
Fundació Jaume Bofill. As a think & do tank focused on next educational challenges, Jaume Bofill develops research, programs and coalitions to achieve the best educational policies and practices that can deliver quality education for all. In recent years, they have moved their approach from education reform to ecosystem innovation. They have shifted their commitment to innovation, system transformation and focusing on a few short-term (3-5 years) and mid-to-long term educational challenges to make a bolder impact. Their current focus is on how to catalyze and support an innovation ecosystem in Spain. Their strategy consists in connecting leaders, changemakers and innovators, identifying and scaling programs, creating alliances and platforms to build and catalyze ecosystems and spread and share education innovation.
Spain – https://learnlife.com
LearnLife. This organization is working toward the creation of an open ecosystem for a new lifelong learning paradigm alongside existing education systems. They conducted research that looked at many highly regarded ‘best practice’ examples of innovative schools from around the world. In collaboration with thought leaders for learning, they are developing new learning approaches, learning spaces, and learning technologies that are responsive to the inspirations, needs, and challenges of today’s children and future generations.

These are just some of the ecosystem-oriented learning innovations happening in Latin America. There are many more, not just in this part of the world, but also in many other regions the world over. A recent report put together in collaboration with Global Education Futures and HundrED (Schleicher et al., 2020) makes the following assertion:

This research aims to build the field of emerging praxis, a continuation of work developed in 2018 by Global Education Futures in their report “Educational Ecosystems for Societal Transformation”, sharing insights from over 500 leaders from 50 countries, exploring the future of education and how learning can be a leverage point for creating thriving futures for all. ... new insights illuminate how learning ecosystems are a new horizon for developing learning and education. ... this work highlights (1) what skills, knowledge and ways of being support children, adults, and elders to lead fulfilling and thriving lives, (2) why ecosystemic approaches can serve individuals and communities in their learning journeys throughout their whole lives, and (3) how educational systems can support human flourishing that will also transform our global society toward long-term resilience and thriving for humanity and the biosphere.

As that report makes clear, ELEs and the learning ecosystem approach are having an impact in many parts of the world, creating the environments and communities of learning communities that support a new dynamic of collaborative learning — one that cannot be found within the school walls of any single academic institution. The challenge, as with any true education innovation, is to support such frameworks and approaches even when it is new and as yet without substantial history to show a proven track-record. Only the pragmatic visionaries will do so, and in the process will emerge the next generation of education provision based on the power of collective intelligence, social and emotional learning (SEL) combined with empathy based learning (EBL, as discussed in the 10 December 2020 article on how “in Denmark, Empathy is Taught As a School Subject that Kids Must Learn from a Very Young Age”.