

25 From profit to prosperity

Making the impossible possible through integral investing

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Introduction

In *The Collapse of Complex Societies* (1988), anthropologist Joseph Tainter argued that evolved societies, such as the Mayan and the Roman Empire, ultimately collapsed due to the “Law of Accelerated Returns” (p. 93), which makes it eventually impossible for the society to pay for the increasing cost per person required to maintain the growing complexity. Since the fall of the Roman Empire, we can witness many more complex societies that have developed around the world and whose economies now operate not only in local but global economies—more later. As a result, we face grand global challenges of unprecedented scale (von Weitzsaecker & Wijkman (Eds.), 2018) that only exacerbate the load shown by the law of diminishing returns.

As opposed to the Law of Diminishing Results, we witness for the first time in human history what Ray Kurzweil (2005) calls the “Law of Accelerating Returns” (p. 35), which refers to the speed and power of the evolutionary process that increases exponentially over time and that leads to massive cost reduction and demonetization. As we will see later, the process of the consciousness evolution explodes exponentially so that *the rate of exponential growth itself grows exponentially* creating an abundance that could provide humanity with a window of opportunity to build more resilient and sustainable societies and avoid the impending collapse.

Otto Scharmer of MIT argues that “intellectual bankruptcy [...] underlies the financial and economic bankruptcy of many established organizations and institutions” causing the current grand global challenges (Scharmer, 2010, p.17). He suggests that the transition towards a regenerative, ecosystem-centered economy, must first address “the blind spot of economics and economic theory [which] is our own *consciousness*—our structure of attention and state of awareness and how it affects our individual and collective behavior” (p.17). Unfortunately, such blind spots can arguably be found also in solutions recommended by progressive thinkers including the proponents of circular economy. A series of examples for such reductionistic thinking has been delivered by researcher Barrett C. Brown (2007, 20 February, pp. 19–28). Brown performed an in-depth analysis of eight bestselling books on sustainability, circular economy, and ecological business development by renowned researchers including Brown (2006), Hawken

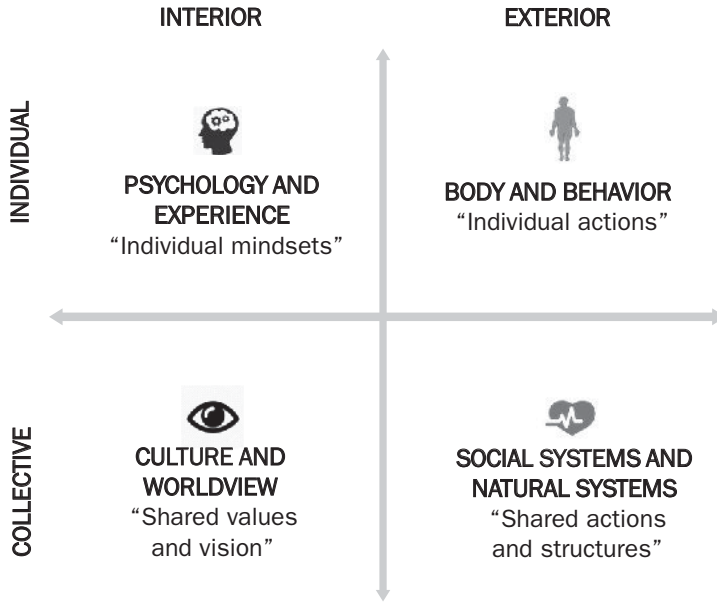


Figure 25.1 Quadrant view of the Ken Wilber's integral framework.

Source: Own picture after Wilber (2000).

(1993), Hawken, Lovins & Lovins (1999), Holliday, Jackson & Svensson (2002), McDonough & Braungart (2002), Nattrass & Altomare (1999), Holliday, Schmideiny & Watts (2002), and the World Commission on Environment and Development (2009/1987). Barrett C. Brown, whose report is titled *Four Worlds of Sustainability: Drawing upon Four Universal Perspectives to Support Sustainability Initiatives*, took an ontological approach to perform his investigation with the intention to find out how many different perspectives these progressive authors took in their effort to address humanity's crises. Under the assumption that current catastrophic risks such as climate change can only be addressed from a holistic perspective and later stages of consciousness, Barrett C. Brown used the lens of consciousness by Ken Wilber's (2000) integral theory depicted in a simplified form in Figure 25.1.

Integral theory: integrating the concealed dimensions of reality

At the foundation of Wilber's integral theory (2000) is the understanding that the perceived reality is most comprehensively represented through Plato's (1961/1938) *value spheres of humanity* exemplified as four quadrants in Figure 25.1. These value spheres are the *Beautiful* (interior-individual subjective mindset), the *Good* (interior-collective, inter-subjective/culture/worldviews/morals and ethics), and

the *True* (exterior, objective individual aspects, and exterior collective/science/nature/social systems) represented through the two right-hand quadrants in Figure 25.1. These value spheres are always present, are constantly co-arising, and cannot be separated from each other whether we are consciously aware of them or not. Everything that occurs has these dimensions, perspectives, or points of view: an individual-subjective view; a collective-subjective/cultural view; an objective, provable-facts view, exterior individual; and a collective, exterior view that refers to the social structures and the ecology realms (Wilber, 2000).

In his investigation, Barrett C. Brown did not intend to provide an epistemological interpretation of the texts; instead, he analyzed every sentence in each of the eight books, classifying the sentences according to the view of the world (quadrant) on which they focused. He examined each sentence to evaluate whether it represented (1) an interior or exterior view and/or (2) an individual or collective perspective of reality. Barrett C. Brown determined that the exterior, lower-right quadrant perspective (Figure 25.1), the social systems, and the environment views dominated. The interior, subjective aspects such as the collective inter-subjective, the cultural aspects, shared values, and vision, as well as the individual interior perspective, individual mindsets, or individual external behaviors and actions were significantly under-represented. Brown concludes that the lower-right quadrant is obviously the strongest and most powerful influencer for change in society. However, he also shows why there is little chance of future success if we do not take an integral sustainability approach, one that uses the entire integral framework of consciousness (Wilber, 2000) instead of just one quadrant. In the final analysis, Brown argues that the one-sided, mostly external (social and environmental) view of the world taken by all authors missed being informed by the interior dimensions of reality such as the shared vision, the collective cultural mindsets, but also emotional intelligence, the psycho-spiritual intelligence, and other dimensions of life. He concludes that this approach limited the authors' perspective of the world, biased their analyses, and unavoidably lead to the impossibility of delivering comprehensive solutions to current global grand challenges. Which additional perspectives are potentially also missing?

The exponential global

Throughout evolution, humans have been conditioned to think *linearly* and *locally* because for eons we inhabited mostly a limited geographic area, lived on average a relatively short time, and performed mostly the same occupations as our ancestors did. For generations, our lives were predetermined and *complicated* at best. But the accelerated technological growth, most visibly felt since the first industrial revolution, starting at the end of the 18th century, challenged us in unprecedented ways. Technology is the pinnacle of the human capacity to impact the world through intelligence. Why? Because, from the creation of the first life form to the creation of cells, it took biological evolution 2 billion years (Kurzweil, 2005). The technological evolution, however, needed only 14 years to move from the invention of the first personal computer in 1975 to the World Wide Web (Bozesan,

2020). In other words, biological evolution eventually led to technological evolution placing humanity at the beginning of its exponential acceleration (Tegmark, 2017) including all its ups and downfalls. Entrepreneur Elon Musk even views humanity as a “biological bootloader for digital superintelligence” in that our biology provided the small but crucial piece of code required to jump-start the AI revolution and warns of its unmitigated dangers if we want to save consciousness (Bozesan, 2020, p. 243)—more later.

Today, we live in a *global* world that is massively ruled by the *exponentially* growing complexity of technology. Life is not just complicated but has become a function of the *exponentially increasing complexity*, of which humanity can hardly make any sense, as the COVID-19 crisis demonstrates. In trying to respond to such big challenges, human ingenuity produces a myriad of theories, models, solutions, and alternatives that can increase sensemaking but how can we decide which ones to pursue and which ones to abandon? What informs our decision making?

On clarity and chaos

The innovative knowledge thinker and former IBM management consultant, Dave Snowden, used complexity science to develop the decision support framework known as Cynefin (a Welsh word pronounced kə'nɛvɪn/kuh-NEV-in) (Snowden & Friends, 2021). Cynefin enables emergent action by “looking at the dynamic interplay between deductive, inductive and abductive sense making” (p. 58). At the heart of the Cynefin framework are four natural patterns that logically and intuitively move between *Complex*, *Complicated*, *Clear*, and *Chaos* whereby each pattern is governed by varying constraints. A *complicated* domain is a domain where the governing constraints are ruled by causal relationships that can eventually be comprehended and acted upon. For example, we can develop, build, maintain, and repair a space shuttle; we can perform surgeries, and we can build smart computers and complicated algorithms. With appropriate training, best practices and expertise, the *complicated* things can be analyzed, addressed, and a wide range of answers can materialize—e.g., engineering, medicine, law, and algorithms.

The *complex* domain, on the other hand, can only be understood in retrospect because it is evolutionarily emerging and there are no right or wrong answers—e.g., markets, ecosystems, cultures, or personal growth (Hendricks & Ludeman (1996)). Human civilizations have moved well beyond the *complicated* that governed our lives in the past mostly at the *local* levels and are currently facing several global, *complex*, and *exponentially growing* domains, which are exacerbating each other—catastrophic risks threatening planetary boundaries, unsafe AI, nanotech, biotech, to name a few. For example, John von Neumann, designer of the von Neumann computer architecture, predicted already in the 1950s the impact of exponential growth within the realm of the technology acceleration (Oxtoby et al., May 1958). We are now at the pivotal point of technological evolution where its exponential growth is becoming explosive and massively

disruptive. Thus, if we want not only to survive but also to thrive in the 21st century, we must learn to think, and most important to *act, exponentially and globally*. For example, it should worry us that the sensemaking of the billions of people on social media is increasingly governed not by high ethics and morals of democratic legislation but by AI programmers and their supervisors (at Google, Facebook, or TikTok, to name a few) who are driven by profit maximization—as demonstrated in the insightful Netflix movie *The Social Dilemma*. Within this context, Daniel Schmachtenberger (June 25, 2021, min 1:16:44) argues that we will not be able to address current issues, unless we understand the attractors determining the current “oligarchic tech feudalism” which operates outside public accountability or democratic jurisprudence. Therefore, it did not come as a surprise when concerned scientists comprising of the late Stephen Hawking, MIT professor Max Tegmark, as well as renowned entrepreneurs Elon Musk, Ray Kurzweil, and Dennis Hassabis, devised the Asilomar AI Principles to ensure the ethical application of AI (2017), accelerate AI-safety research, and prevent autonomous, super-intelligent AI (Bozesan, 2020, pp. 71–88).

Thus far, Barrett C. Brown argues that the integral theory by Ken Wilber is prone to deliver multi-perspectival solutions in a global world ruled by highly intricate economic, social, and environmental interdependencies. And Dave Snowden’s Cynefin model shows how to use natural science to make better sense of the world with the intention to enable emergent action within the exponentially growing complexity at global levels. Next, we will use the lens of transdisciplinarity to deepen our analysis of additional impossibilities of circular economic models.

Transdisciplinarity and the new mindset

Transdisciplinarity is a research method that spans the boundaries of many disciplines to enable the design of new and holistic approaches to the ever-growing complexity of evolution. It transcends and includes theories and/or techniques that were originally developed by one single discipline to advance new, evolutionary ones. The term transdisciplinarity was originally introduced in 1970 by child psychologist Jean Piaget (Nicolescu, 2005) and further developed by Robert Kegan (1982) with the intention to distinguish it from interdisciplinarity, which transfers methods from one discipline to another while remaining within the framework of each individual discipline. Theoretical physicist and transdisciplinary scientist, Basarab Nicolescu (2005), postulates that (1) *Reality has several levels of existence* (2) there is an *included middle* whose logic describes the coherence of various levels of reality, and (3) there is an *ever-growing complexity*. While observing reality, we become aware that it has several levels and see that both the space between disciplines and beyond them is also filled with information. Thus, Nicolescu insists that the action logic of the *included middle* of reality has significant consequences for the theory of knowledge because it implies that knowledge remains always open and cannot be confined to a complete theory. This ties in with Barrett C. Brown’s analysis of the progressive economic

models discussed earlier that challenges the current mindset and understanding of consciousness that no longer serves us.

It appears that a new mindset is needed, one based on later stages of consciousness evolution; a mindset that provides answers to new questions, including: Why do we keep defining the problems too narrowly despite living in an interconnected, global world? Is human evolution self-terminating? Is human civilization self-terminating? Why have civilizations tethered between chaos and order, leading to today's tragedy of the commons? What prevents us from becoming better stewards of power? Why do civilizations fail? How can human civilization become antifragile in the presence of existential risks? Are we currently fighting a non-kinetic World War III through AI-driven tech? Is democracy itself at risk? Is democracy currently evolving or regressing? How can the tension between authoritarian nation states and the greed of capitalism (lead by exponential tech companies) be solved? Can holistic, superordinate, transdisciplinary solutions emerge within planetary boundaries? Who is asking? Who are we? What is the purpose of life? What is consciousness?

Consciousness and the case against reality

The astrobiologists Russell and Kanik (2010) maintain that the purpose of life is “the hydrogenation of carbon dioxide” (p. 1012) because from a thermodynamic point of view, life “evolves to maximize entropy and attempts to reach this state as rapidly as possible” (p. 1015). We could adopt this theory and accept that consciousness arises out of unconscious matter, a theory known as the “*hard problem of consciousness*” (Bozesan, 2020, p. 82), which assumes that space and time are foundational. We could. We could also accept Richard Dawkins’ assertion that we are nothing more than the sum of our genes, “a set of instructions for how to make a body” (1976, p. 23), as described by our DNA and which could be downloaded into a robot (and live forever) as soon as technology makes it possible. Or could we? Can life—*can sentient beings*—really be reduced to a genetic code that could be entirely replicated and eventually downloaded into AIs to solve current challenges (including the impossibilities of circular economy), perpetuate, broaden, enhance, and expand life beyond Earth as the transhumanists (Bostrom, 2005) envision?

Unfortunately, the scope of this paper does not permit digging deeper into the centuries-old, ongoing dispute between mechanistic dualists, scientific materialists, cognitive psychologists, and panpsychist philosophers, to name only a few factions of consciousness theorists (Bozesan, 2020). What should be mentioned here is the (not so recent) work of cognitive scientist Donald Hoffman (2019), who is arguing that we miss important aspects of reality if we continue to assume that consciousness arises from unconscious matter. In his book, *The Case Against Reality* (2019), Donald Hoffman shows his alignment with the latest discoveries in physics such as theoretical physicist and Princeton Professor Nima Arkani-Hamed, who argues that “space-time is doomed” (2018, June 20, min. 8:35) because the current theories (e.g., quantum mechanics and gravity) do not

answer several important structural questions including the very essential ones such as *Why is the universe the way it is?* In observing the new theories in physics but also Kurt Gödel's (1931) incompleteness theorems, Hoffman suggests that consciousness must be more essential and elemental than space-time. Based on his research in visual and computational psychology at MIT, Hoffman concedes that "evolution hid the truth from our eyes [to help us evolve]" and defines consciousness anew using the mathematical model of a conscious agent (Hoffman, 2019, pp. 203–205). He challenges leading scientific theories of consciousness, which assume that our senses register objective reality, and maintains that we should instead take what we see, hear, and feel, seriously but not literally. Our impression of objective reality, for example, a "tree" or a "car," Hoffman insists, is only "eye candy" that helps us navigate the world safely and with ease. The "tree" or the "car" is to be interpreted as literal as the icons on our computer screen. The icons are hiding the fact that they are, at the computer hardware level, a collection of "0" and "1," or electric impulses, if we want to go deeper. According to Donald Hoffman, space-time is "your virtual reality, a headset of your own making. The objects you see are your invention. You create them with a glance and destroy them with a blink" (2019, p. 202). He ends his book with the open question: "What happens if you take it [the headset] off?"

It could be argued that if we want to address the impossibilities of circular economy, we ought to consider exactly that: Questioning the very definition of consciousness that (potentially) created the current reality and assessing what new mindset (or level of consciousness) would help to create the reality that would not terminate human civilization. Trying to answer such questions is likely to preoccupy humanity for the duration of its existence.

Equipped with an expanded understanding of consciousness, an updated decision support system, a renewed appreciation of complexity and a multi-perspectival view of knowledge, and transdisciplinarity as a post-post-modern research method, we will focus next on the application of later stages of consciousness within the exemplification of early-stage investing and entrepreneurship.

From profit to prosperity through integral investing: a case study

It is widely accepted that humanity is currently not well prepared to address global grand challenges, particularly existential threats (Bostrom & Circovic (Eds.), 2008; Randers, 2012), but there is also hope (Bozesan, 2020; Hawken (Ed.), 2017; Pinker, 2011; Randers et al., 2018). This paper makes the case for the need for a major shift in consciousness (a mind shift) to address the impossibilities of current circular economic models. The necessary mind shift appears to be occurring as can be witnessed, for example, at the level of the European Commission that launched the European Green Deal (2019). Its action plan aims to implement a sustainable finance model that should be prepared to meet both the goals of the Paris Accord, through carbon neutrality by 2050, and the Agenda 2030 of the United Nations (with its 17 Sustainable Development Goals). Since we can only achieve what we measure, the European Green Deal is accompanied

by the Financing Sustainable Growth set of documents (2019, June) that includes a *Taxonomy*, sustainability-related *Disclosures* (such as Environmental Social and Governance—ESG—criteria), as well as *Benchmarks* for climate and others. The effort of the European Commission has been joined by US President Joe Biden's *Executive Order on Tackling the Climate Crisis at Home and Abroad* (White House, 2021, January 27) and by the Chinese government whose five-year plan includes the divestment of investments from fossil fuels to green technology (UNDP, 2021 July). These efforts are providing the first regulatory and legislative steps for the greater mind shift necessary for societal, environmental, and cultural transformations including the transition to sustainable economics, finance, business, and education, to name a few.

This mind shift appears to be leading to a dramatic paradigm shift and to a major acceleration in creativity and radical product innovation in leading-edge, exponential technology start-ups as well (e.g., Bozesan, 2020; Diamandis & Kotler, 2012 & 2015 & 2020). For example, German environmentalist, high-tech entrepreneur, and founder of Hyperganic (2021), Lin Kyser shows how to use exponentially growing technologies to implement circular economic models within the context of a single start-up. He demonstrates how traditional computer-aided design can be replaced by computer-generated design; a new paradigm based on principles of highly complex, AI-based, generatively designed products that can be 3D printed. These massively customized products—e.g., airplane or satellite turbines, rocket combustion chambers, or customized bike helmets—can only be manufactured (3D printed) after being designed by highly complex algorithms that define their geometry (to be 3D printed) and whose AI (neural nets) can be transferred between products.

As more governments are providing capital and other stimulus packages, the need for accelerated digitalization and scalable investment decisions for implementing the UN SDGs within planetary boundaries by 2050 becomes our duty, particularly since start-ups like Hyperganic are desperately in need of funding that has been traditionally scarce. Small to medium enterprises (SMEs) are a substantial economic force worldwide—with a contribution of “about 90% of businesses and more than 50% of employment worldwide. Formal SMEs contribute up to 40% of national income (GDP) in emerging economies” (The World Bank, 2020); developed countries are no exception. The German Federal Ministry of Economic Affairs and Energy (2017), for example, attests that SMEs’ “contribution towards Germany’s economic strength, [represents] approx. 35% of total corporate turnover ... In terms of their contribution to GDP, these companies even account for close to 55%.” Yet, despite the massive amount of capital available in the market and the low-interest policies of central banks since the financial crisis of 2008, SMEs are the last to partake in it due to the high risk associated with the particular asset class they represent. Better due-diligence processes are needed to solve the problem and the new green deals are coming to the rescue. The strategic direction of the various governmental new green deals represents an important guiding post for all players including investors, entrepreneurs, and businesspeople alike because it entices smart action and supports the efforts of

already environmentally and socially active market leaders. From an early-stage investing perspective, we will look at *Integral Investing* (Bozesan, 2020) and its de-risking model, the Theta Model, as an integrative framework for sustainable investing based on integral theory by Ken Wilber (2000) (Figure 25.1).

De-Risking with the Theta Model

The *Integral Investing* framework pre-supposes a later-stage consciousness and mindset that integrates, transcends, and includes both traditional investing and impact investing practice and metrics with the intention to build integrally sustainable companies from the very beginning. It argues that all investment activity must be rooted in the essence of *all* existence, the later-stage levels of consciousness including culture, values, ethics, and morals as well as exterior reality, the material world, such as the social and the environment. As a result, Integral Investing shows that financial sustainability cannot be separated from the environmental, social, cultural, and an ethical impact, as well as individual self-actualization, joy, and personal happiness (in short, the 6Ps: *Parity of People Planet and Profit with Passion and Purpose*); and provides an integration framework. The increased complexity of the investment process also begs the question how the entire value chain creation from the original start-up screening to the actual exit can be implemented within the context of the de-risking process. The answer can be found in the Theta Model (Figure 25.2), which makes Wilber's (2000) integral theory, at later stages of development, applicable within early-stage investing.

The five steps of the Theta Model integrate (a) traditional investing due-diligence criteria (*Step 1*: financial, legal, sales due-diligence) with (b) sustainability criteria and impact investing metrics (*Step 2*: UN SDGs within planetary boundaries, as well as Social, Environmental, and Governance (ESG) of the UN PRI) with (c) *Steps 4 and 5*: collective cultural, behavioral, and individual and collective mindset criteria, before it leads to the decision to invest or not (*Step 5*). Through its due-diligence, the Theta Model navigates the entire integral framework (Figure 25.1) as defined by Ken Wilber (2000) and has shown to be a powerful de-risking tool that enables a differentiated view not only of investees as individuals and in terms of company culture, but also of the context of investing, the exterior reality. This reality is made of a complex mesh of interdependent and intra- and interconnected *ecological* organizations, *social* and *cultural* structures, and *behavioral* factors, all of which are subject to *consciousness evolution*. The Theta Model has been successfully applied in early-stage investing since 1994 and could, of course, be used to de-risk investments in larger companies, albeit more complex than within the start-up context. The large-scale application of such a model would presuppose a world-centric level of consciousness, one that has outgrown both the egocentric (me and mine) and the ethno-centric/tribal ("make America great again" kind of thinking) mindset. The world-centric mindset focuses on the healthy development of *all humans* (everybody wins) and the flourishing of *all life*, everywhere. In 1985,

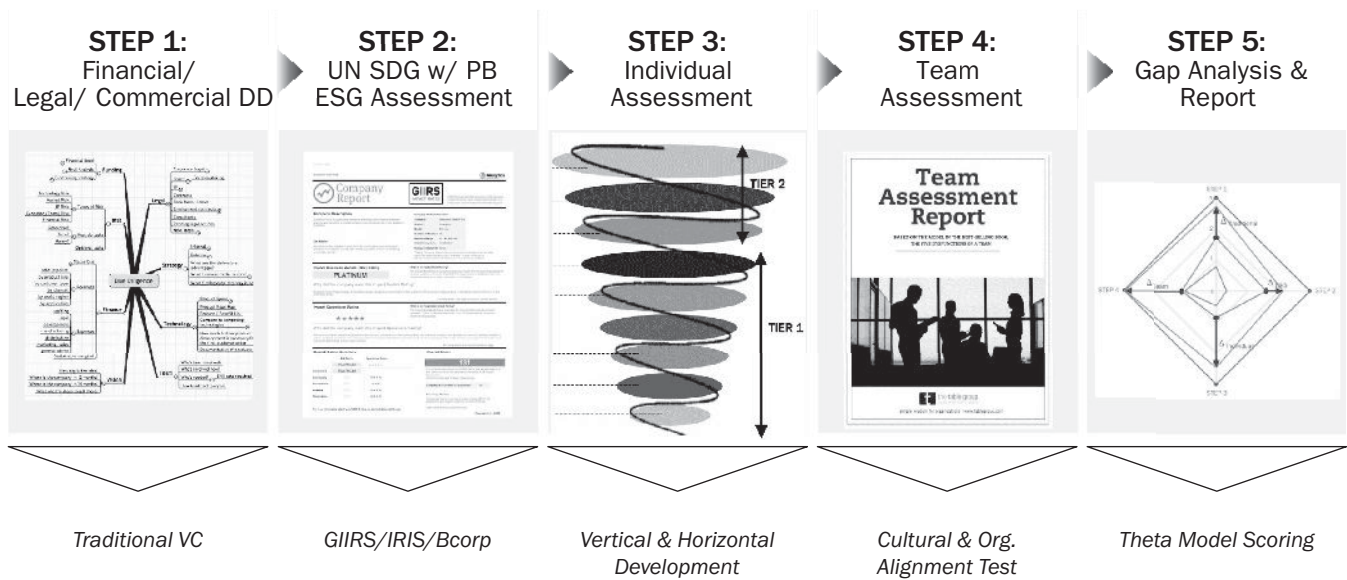


Figure 25.2 De-risking with the Theta Model.
Source: Own depiction.

Herman Daly called for “an engineering student to explain how a car can run on its own exhaust” (Daly, 1991, p. 197), which was impossible back then. Technologically, this is no longer the case due to advanced photo bioreactors, which use a wide range of micro-organisms to produce biofuels directly from CO₂ emissions using sunlight. I have personally invested in a US-based bio-fuel company, called BioCEE, a world-centric, integrally acting start-up that produced biofuels from CO₂ emissions. Unfortunately, the US government decided to promote fracking and fossil fuels subsidies rendering progressive bio-fuel companies financially unsustainable. What we can learn from this example is that the best intentions, the best ideas, and the smartest technology are not enough to make circular economy solutions feasible. The political will is more important and will win every time—as long as it remains rooted in an ethno-centric mindset instead of a world-centric one.

Summary

Only the future will show if humanity makes the transformation to a sustainable global civilization possible, particularly since a shift in mindset and the graduation to later stages of consciousness are the premise for said transformation. In this chapter, I argue that we need a new, transdisciplinary, understanding, and appreciation for multi-perspectival solutions in a global world ruled by highly intricate economic, social, and environmental interdependencies; a world in which we can deepen our understanding associated with the impossibilities of circular economic models. It is true that we cannot go beyond the first principles of science such as the law of thermodynamics. However, consciousness evolution and theoretical models such as Ken Wilber’s integral theory, Dave Snowden’s Cynefin model, and Donald Hoffman’s new definition of consciousness could provide deeper guidance on how to make better sense of the world with the intention to enable emergent action within the exponentially growing complexity at global levels. As we have seen, we do not have to succumb to the Law of Diminishing Results and let human civilization collapse, as in previous cultures. Now, for the first time in the history of human civilization, we witness the Law of Accelerated Returns that can create an abundance that has the potential to help eradicate global poverty, address climate change, and implement the UN SDGs within planetary boundaries before the Earth strikes back. But we must do the work, and it is not going to be easy. In times of crisis, we see clearly that we cannot control what other people do, we cannot control the weather, and we certainly cannot control a pandemic. What is in our own reach, however, are our own thoughts, our emotional and psycho-spiritual states, and our behavior. We can despair, we can panic and become a burden, or we can grow emotionally and spiritually and become an inspiration and a force for good. We are the only person thinking in our heads, but we must protect the entrance to it. Consciousness evolves through us and can make the impossible possible within the laws of physics. But we do have choices. We can decide what kind of person we want to be, and we must grow if we do not want to regress as previous societies have done. Our own

level of consciousness, our mindset, will determine whether we choose misery or happiness. What will you choose? Others will follow.

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