

Is the Global Economy Running a Pyramid Scheme?



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Abstract We now live in the “Anthropocene”. Human dominance of the biosphere is the result of global ecological overshoot, breaching several ecological boundaries. Overusing the future’s resources to run the present economy is a clear example of what lawyers and economists call a “pyramid scheme”. Such a scheme is highly unstable and self-destructive, and therefore outlawed in most countries. How come, though, it is tolerated in the ecological domain? Why is our current ecological overshoot not even generally acknowledged as a pyramid scheme? Can it even be seen if the physical dimension of human existence is largely missing in policy-oriented sciences? Why is it missing in current social sciences? Through these questions, this paper explores what might be key reasons behind our societies’ inability to respond to this massive pyramid scheme. It proposes that unacknowledged and undigested colonial philosophies are still deeply embedded in those sciences. These hidden philosophies may be key contributions to our dangerous blindness and our distorted collective situational awareness.

Keywords Global economics; Pyramid/Ponzi scheme · Climate change · Colonial past · Social theory

1 Introduction

The answer to the question raised in the title of this chapter is straightforward: Yes. It is hard to imagine a more obvious case of a pyramid scheme (*see Box 1*). Humanity’s resource overuse is clearly robbing the future to pay for the present. It requires constant depletion of our underlying natural wealth to maintain the current income. Ultimately, if not rectified, this ends in ecologically bankrupting humanity.

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Therefore, pyramid schemes in any form are illegal in most countries.

How come then, we let the ecological pyramid scheme run amok collectively? Let me first outline how big this ecological pyramid scheme is, before speculating about possible reasons we have not been intervening. Then I will identify possible pathways to rectify this challenge.

BOX 1: What is an Ecological Pyramid Scheme?

Pyramid schemes (“Schneeball-System” in German) are a scam in which you rob Peter to pay Paul. Unfairly, they are often attributed to Charles Ponzi. It’s possibly another gender bias in history, because fraudsters Sarah Howe in the US and Adele Spitzeder in Germany predated Ponzi by at least 40 years. The former swindled Boston ladies [21], the latter ran a bank that defrauded over 30,000 people and led to a loss currently valued at 400 million Euros [8]. There are good reasons to believe that others figured out pyramid schemes even before these two ladies.

No one has been greater at implementing pyramid schemes (called Ponzi schemes in the US) than Bernie Madoff, whose version involved \$65 billion of client money. His strategy, like his predecessors, consisted of relying on a steady flow of new investments to provide “returns” to earlier investors. He took from the future to pay for the present.

Yet collectively, Madoff has been massively outdone: Our current economies are running the largest pyramid scheme ever. We are depleting the Earth’s future biological resources to run present activities. Currently, humanity consumes the planet’s biological resources more quickly than Earth can replenish them. Whether financial or ecological, debt balloons eventually burst. Humanity’s ecological debt shows up as excessive carbon in the atmosphere, collapsing fish stocks, shrinking forests, eroding soils, and ground-water drying up.

Pyramid schemes are bound to come to an end; the question is whether by design or disaster. It is more rational to prefer design, but it requires honest accounting and resolve.

2 The Scale of the Pyramid Scheme

This is the situation as I see it: Colossal overuse of Earth’s natural capital leading to the climate crisis and biological mass extinction have made the protection of the biosphere the top priority for securing human and non-human life on our planet. Hence, the speed and scale of the needed transformation is large, even if we assume that Climate Change is the only issue in need to be resolved—but it isn’t [2]. The Paris Climate Agreement gives us guidance in this pressing issue: it commits humanity to

never warm the planet to more than 2 °C beyond the pre-industrial global average temperature (and if possible only 1.5 °C) [26].

This temperature limit translates into a clear upper greenhouse gas threshold: According to the fifth assessment of the IPCC, an atmospheric greenhouse gas concentration of 450 ppm CO_{2eq} (meaning CO₂ equivalent, which includes all relevant greenhouse gases) would give humanity a 66% chance to stay within a 2 °C global warming limit [15]. This is an upper threshold, because a 66% chance of not exceeding 2 °C is far weaker than “holding the increase in the global average temperature to well below 2 °C” as stated in the Paris Agreement. Yet NOAA, a science agency of the US government focused on the conditions of oceans and the atmosphere, reports that in 2020, the atmosphere had already reached 504 ppm CO_{2eq} [4]. The latter number being massively higher than the former suggests that there is no carbon budget left any longer. Living up to the Paris Agreement would therefore require a very rapid decarbonization. This means ceasing fossil fuel use, producing cement without carbon emission, plus pushing forward large amounts of carbon sequestration, all well before 2050.

Whether humanity decarbonizes proactively, or eventually runs out of exploitable fossil fuels (leaving a massive greenhouse gas debt in the atmosphere), humanity will inevitably have to live off our planet’s regeneration, not its liquidation. The earlier humanity can transform, the more our planet’s regeneration capacity will be left. In other words, the swifter humanity curbs its fossil fuel demand, the more of the planet’s regenerative resource budget will be safeguarded. Decarbonization requires focus and willpower, since other energy sources take more effort. After all, the versatile and powerful fossil fuels have massively eased people’s biological budget constraints during this era.

Fossil fuel helps to produce far more food and feed thanks to fertilizers, pumps and tractors; it also enables storing, processing and shipping of food and feed around the world, overcoming local food production limitations. It substitutes many biological fibres, with 70% of fibres now produced synthetically [1]. Additionally, it heats more houses without burning wood, and it gets people around the world without feeding horses and donkeys.

This fossil fuel use has amplified human demand to an extent where it now exceeds what the planet can renew. Global Footprint Network’s estimates, possibly the most comprehensive ones available worldwide, indicate that humanity demands at least 73% more from our planet than its ecosystems can renew [17], Global Footprint Network [10]). This is like using 1.73 planet Earths.¹ But to safeguard 85% of the world’s biodiversity, humanity would need to use less than half of the Earth, according to E.O. Wilson [33]. Consequently, human demand has grown to over threefold (or 1.73/0.5) the rate that could be compatible with lasting conservation, including stabilizing our climate.

¹ This result is for 2017. Estimates for the first half of 2020 indicate that the COVID induced lockdowns reduced humanity’s demand on nature about 9 % compared to 2019 [11], at least in the first half of 2020 [18]. Estimates for 2021 suggest that the level of overshoot rose again to the same level as 2019 [18].

This 3-factor gap, accelerated by the pyramid scheme, merely represents an average. It does not reflect that many members of humanity still need more materials and resources to thrive. The current resource gap also does not reveal that the average human family keeps growing.

Further, protecting nature is, in itself, an important goal. Nature's aesthetic and spiritual value is unfathomable. Yet, the goal to protect sometimes clashes with people's ambitions and material demands. These demands have become so big that protecting nature has become even more urgent if humanity wants a future where all can thrive within the means of our planet.

What may be underappreciated is that it is possible for human demand to exceed planetary regeneration for a while, because there are stocks that can be depleted; it is even possible to increase demand during such ecological overshoot. Still, because of basic laws of physics, eventually demand will be reduced again to the planet's (potentially diminished) regenerative capacity—the question is only whether humanity will get there by design or disaster.

The urgency is growing because the massive technological progress witnessed over the past 100 years has amplified, rather than decoupled, human dependence on the biosphere. This situation is not easy to shift since despite astonishing cultural and technical accomplishments: humanity remains ill-equipped to resolve the ecological sustainability challenge, including biodiversity preservation. As a result, pressures on the biosphere are increasingly threatening humanity's achievements—and the future of all other species.

3 Is There Merely One Key Factor Limiting Human Response?

To solve this complex challenge, a sharp understanding of its cause is required. Certainly, there may not just be one cause. In fact, it is easy to brainstorm a long list of potential reasons driving this problem.² But that's not actionable.

The science community still lacks a sharp understanding of the mechanisms that hold humanity back from addressing the pyramid scheme leading to Climate Change and resource constraints. Given what is at stake, this may be humanity's most significant knowledge gap. Without this knowledge, it will be unlikely that this pyramid

² There are always many contributing elements shaping a problem. For instance, with COVID, one could identify an *r*-factor higher than 1 as the central reason for the spread of the corona virus. There are multiple things that determine that one reason (the *r*-factor). In the COVID case it would be vaccination rates, number of social interactions, proximity of people and ventilation, face protection, susceptibility etc. Each one of them contributes to the *r*-factor. Still the *r*-factor can be seen as the single determinant of the outcome. Therefore, we could formulate the question as: What is the "r-factor"-equivalent enabling the ecological pyramid scheme?

scheme can be stopped deliberately and with minimal pain before the scheme unravels itself brutally and uncontrollably.

This section makes the case that more effort needs to be put into identifying the most influential causes that keep us from dismantling the pyramid scheme, starting by developing some hypotheses.

Certainly, the pyramid dynamics have a lot to do with two underlying forces identified by Nate Hagens [12]. The first factor is efficient fossil fuel access (meaning it has a high energy return on energy investment). This first factor gets accelerated by the second one: the availability of financial debt enabling investments in industrial technologies that can extract and use ever more fossil fuel. These two forces keep expanding the pyramid scheme. Given the large amount of fossil fuel stocks in the Earth's crust, the scheme has persisted for nearly two centuries with large-scale effects like Climate Change becoming increasingly visible.

Could it be one single reason for humanity not taking this risk seriously? Or is it a necessary confluence of several ones, possibly with one "last straw that breaks the camel's back". For instance, modern-day flight procedures are designed in a way to make sure that planes are always half a dozen errors away from crashing. This means crashes only happen if a combination of errors occurs simultaneously. Multiple errors happening at the same time is by magnitudes less likely than any single error cropping up. Therefore, the airline industry carefully keeps track of all errors: It is error-positive, encouraging all operators to report any error they have encountered or caused. This knowledge gathering about all possible errors then leads to decreasing the likelihood of all errors, with the consequence of fantastically low airliner crash rates.

Still, some errors or occurrences are more significant than others. Understanding such limiting factors opens up more effective intervention opportunities, as advocated by Buckminster Fuller through his the promotion of "trim-tab solutions". Inspiration for the possibility of such key drivers comes from the agricultural sciences: "Liebig's law of the minimum". German chemist Justus von Liebig popularized the notion that plants require various inputs to grow (water, sun, phosphorous, nitrogen, CO₂, etc.), but the one in least supply limits the overall growth of the plant. For instance, if a plant has sufficient water, but is limited by nitrogen, providing the plant with more water will not increase growth. The question is whether a similar dynamic may also be true for human systems, where one (or at least very few) particular issues limit improving the situation.

Therefore, efforts to search more deeply for underlying reasons that influence a complex behaviour like the current pyramid scheme may be needed to design meaningful, impactful responses. This contrasts with the current discourse in the sustainability arena which is filled with presumed solutions, but are lacking in clearly defining the problems. The proliferation of such approaches may be stimulated by unclear or diverging sustainability definitions. They may thereby hinder rather than accelerate the transformation.

For fear of being labelled a reductionist, I do acknowledge that complex human dynamics may not be determined by one single driver. Such dynamics are best described as interlocking systems with multiple feedback loops. For every driver of

such a dynamic system, it is always possible to find further causes behind each driver. These causes may be part of causal loops, rather than leading to a “root cause” in a linear chain of events. Nevertheless, systems analysts have shown that it is possible to identify those elements that have a particularly large influence on the overall dynamics of the system (see, for instance, Frederic Vester’s “Papiercomputer,” [28].

To initiate a more systemic analysis of the question, the following section identifies potential key drivers behind this challenge. This is continued speculation in search of useful hypotheses.

4 Possible Key Drivers for People’s Underwhelming Reaction to the Pyramid Scheme

This is how I see the challenges, based on experiencing the field over the past few decades:

- I do not view the limiting factor for tackling our planet’s ecological crisis to be a *lack of scientific research* documenting the physical manifestations of these trends (yet, the importance of such research is undeniable).
- It is not a *lack of enlightenment*. We have never had more elaborate and large universities around the world, and never have the number of graduates been higher.
- Nor are we *lacking acknowledgement in political debates* that these trends are happening and this acknowledgement needs to be broadened.
- *Nor is it the biological setup of the human brain*. The human brain does show weakness in thinking systemically and deductively, and gets easily overpowered by inductive stories and emotional shortcuts as discussed by many, including [12].³ But then, there have been uncountable researchers describing the problem, i.e. their brains were able to recognize it. Also, there have been many areas of human endeavour that have been able to address abstract collective challenges. Examples include legal systems, educational institutions, insurance, public health efforts, aviation regulations, etc.

In my view, the most crippling bottleneck is the *insufficient recognition that reacting to this pyramid scheme is also becoming an economic necessity* for each country, city or company, particularly to protect themselves (and much of this reaction will also co-benefit and protect the global commons).

Most countries, cities or companies still ignore that they have profound “skin in the game”—that their well-being and success depends on taking their ecological context seriously. I know of only a few competitive, national development or corporate business strategies, which recognize the global ecological context as a significant parameter of their own success.

³ In the same vein, MIT scholars Vosoughi et al. [29] demonstrated that our inductive brains respond more pro-actively to catchy stories, amplifying the spread of “fake news”. Their “research project finds humans, not bots, are primarily responsible for spread of misleading information.” [7].

The underlying reason may be that social sciences, such as economics and political science, are largely devoid of physical considerations, such as space and matter, but also to a lesser extent, time. Obviously, these academic disciplines are not totally devoid of physics. History recognizes time. Economic analyses include interest rates or discount rates, which are a response to the reality of time. Some economic disciplines specialize on physical aspects of reality, such as environmental economics or agricultural economics. But none of these sub-disciplines of economics recognizes physical constraints to economies, not even the ones imposed by a finite planet: They do not answer whether there is an optimal scale of the physical size of an economy compared to the size of the biosphere. Development economics textbooks sometimes do mention physical conditions, but mostly, they cast resources as a disadvantage to national economies [5, 16, 9, 22, 23]. They emphasize the “resource curse,” a view that portrays the availability of large resource stocks as harmful to countries since they may encourage corruption and distort the market through rent-seeking activities.

Even other social sciences, from sociology to conflict research, underestimate the physical context of society. Sociologist William Catton wrote a unique book about the implications of ecological overshoot (1980), with to my knowledge, barely any other sociological studies before and after acknowledging the physical context of our planet as a central theme for societies. Conflict studies are also unclear about the role of natural resource availability in generating conflict. For example, Henrik Urdal, head of the Peace Research Institute of Oslo, stated in a recent *Washington Post* article that there “isn’t scientific consensus that there is a linear relationship between Climate Change—or resource scarcity, more broadly—and armed conflict” (2019). This statement surprises me, given the history of colonialism, or given the enablers of today’s migrations (e.g. from resource-scarce Central America to the US, or from resource scarce, economically challenged, and often conflict-ridden Middle East and Africa to Europe).

Another example demonstrating the physical blindness of conventional macro-economic policy thinking is presented every year in Davos to world business and policy leaders: The World Economic Forum’s Competitiveness Report [30]. It claims to assess country competitiveness while omitting resource or environmental considerations. Not one of the 103 indicators making up the competitiveness score (the long-term ability of countries to generate economic wealth) measures aspects of resources or the environment. This is even more startling considering that the World Economic Forum’s Global Risks Reports, based on the opinion of over 1000 CEOs, conclude that 9 out of the top 10 current global risks are resource-based or environmental ([31]: in 2019 it was 7 out of 10, in 2018 6 out of 10). Since avoiding dangerous Climate Change implies full decarbonization within a couple of decades, it seems that even a short-term interpretation of competitiveness—i.e. an economy’s future ability to produce value-add—would have significant overlap with the concept of sustainability.

One implication of the lack of physical understanding is people’s inability to react to the climate and resource challenges. It leads to an outdated climate narrative, which keeps portraying sustainability as a noble cause, rather than a necessary one. Too few recognize that the efforts towards resource security and climate action are

not only thoughtful gifts to humanity, but also essential and urgent drivers to build their own successful future.

5 Why is the Physical Dimension Missing in Policy-Oriented Sciences?

To conclude this paper's tentative exploration into the key reasons behind our inability to respond to the pyramid scheme, let me present even more speculative observations and interpretations—to stimulate further debate about underlying causes.

If it is indeed true, that social sciences informing modern policy lack biophysical understanding, the question arises: why do the social science disciplines exclude readily available knowledge from other disciplines such as physics, biology, engineering and architecture?

Social sciences, particularly economics, have not always been devoid of physics and thermodynamics. Classical economists (including John Stuart Mill or Stanley Jevons, and early economists like William Petty) and even social critics like Karl Marx or Thomas Malthus, had a far more physical interpretation of reality than western economists post-World War II.

My reading is that the horrendous nature of World War II, with the final defeat of Hitler, led to a purely ideology-focused interpretation of that massive war. Historians have given far more attention to competing narratives, and less to underlying causes. Hence, the war has been mostly construed as an ideology (i.e., fascism) gone awry, leading not only to large-scale conquests but also to the organized and systematic genocide of Jews, Romani people, and others, and the aggressive deadly persecution of homosexuals, leftists, and many others.

However, interpretations that focus on colliding ideologies miss out on the war's meta-theme: new colonial ambitions (Japan, Italy and German) clashing with established colonial empires (such as the UK, France, Belgium, the Netherlands, Spain, Portugal), and colonialism being internally and externally challenged. Large-scale colonialism had been in motion since at least the Roman Empire and independently in other parts of the world (Incans in South America or the various Chinese dynasties). The emergence of European powers, post the middle ages, extended those regimes' control over ever larger stretches of Asia, Africa and the Americas, and eventually Oceania. Colonial ambitions amplified on the eve of World War II. For instance, Japan ruled Korea after 1910 and started to conquer and occupy portions of China after 1937, eventually capturing big portions of Asia in the following years. Italy started to overtake Abyssinia in 1935. When Germany, with renewed colonial ambitions, turned into a threat for France and the UK after overrunning Poland, the US was reluctant to intervene initially. One reason was that many US citizens did not want to use US military resources to rescue their former colonial master, the UK. They felt that the UK had to pay its own price for its colonial ambitions.

My colonial interpretation of World War II is not to dismiss the conflict of ideologies. Rather, the point is that ideologies or narratives instigating conflicts are more often means to an end, the end being controlling another territory. No army or country can be motivated to grab others' territory by advocating being robbers. Rather, a heroic story has to be told that legitimizes the intervention, whether it is revenge for past injustice (e.g. the Versailles Treaty), dismissal of others' rights (e.g. claim of ethnic superiority), or neutralization of a threat (e.g. fear of Bolshevism). The Allies had ideologies that celebrated, as part of their heroic narrative, being "defenders of democracy and civilization", which is clearly preferable to a fascist ideology. But this Allied ideology still covered up the reality that most Allies were also colonial powers, a contradiction that was never officially resolved.

The eventual defeat of the Nazis and Hitler enabled the winning powers, with the US in the lead, to develop the post-war agenda. The western powers (coming together at the 1944 Bretton Woods conference) ignored the colonial dimension of the war, including the demands of many leaders in colonized countries to achieve self-determination (Julius Nyerere, Kwame Nkrumah, Mahatma Gandhi, Jawaharlal Nehru, Haile Selassie, Sukarno, Mao Zedong, Ho Chi Minh and many others). Using the need for post-war reconstruction, the agenda of economic "development" was promoted, facilitated through the Bretton-Woods institutions, and avoided the question of self-determination. The Bretton Woods agenda focused on the development and on international monetary systems revealing a staggering absence of any colonial discussion.

This agenda is still alive today, and essentially endorsed through the UN system. Only by 1960 did the UN (under the abstention of eight colonial powers) recognize countries' right of self-determination, calling for the end of colonialism. The development agenda covered up the reality that colonies had been major natural resource providers for the colonizing countries, and that industrialization of the colonial centres were fuelled with the resources extracted from their colonies.⁴

The current development agenda barely acknowledges the role of resources, mostly covering the topic under the rubric of "global trade" and "economic growth" and arguing mutual benefit, thereby denying the possibility of systemically unfair conditions and exploitation. Further, there is a lack of acknowledgement that market prices do not reflect the true significance of natural capital and labour. Mainstream theoretical approaches ignore, if not favour, the systematic economic advantage of metropolitan areas: they capture large portions of the value-add in every value chain. They achieve this by controlling brands, IP rights and distribution (e.g. "made in Switzerland") [32].

⁴ In contrast, some argued during the height of Europe's colonial extension, having subjugated 84% of the globe [13], that financially the colonial ventures were not net-positive for the colonizing powers [3]. They implied that colonial powers subsidized, rather than exploited, their colonies. In reality, it is difficult to believe that colonies were merely held as a generous civilization project of the colonial powers in favour of those being colonized. Such financial claims also turn a blind eye on the brutalities of colonialism. The fact that colonies were clearly seen as exploitable assets, owned by "mother countries" is demonstrated in news articles of the time, such as those in the [20] in which the benefits of the colony's resource assets are discussed with great candour.

Further, the unhelpful (non-descriptive and non-explanatory) terminology of “developing countries” and “developed countries” is a symptom of this agenda. The terms continue to be widely used even though they have no clear definition. They even seem to legitimize or at least normalize the colonial history. This terminology, introduced post-World War II hand-in-hand with the Bretton Woods institutions, is still omnipresent within the UN system to this very day, including in climate negotiations. This distinction of countries conjures the idea as if there existed only two possible states of operating, and as if Western European/US type economies were the only possible goal, or way to organize countries. Yet, if all people lived like US residents, it would currently take five Earths according to [11],—clearly not a replicable model either.

This emerging development doctrine was tightly linked with the budding neo-liberal economic theory, which dominated the economics departments of influential universities, particularly in the US. It was the most prominent and influential economic theory from World War II onwards.⁵ In essence, the colonial past, with all its injustices, resentments and guilt, was never recognized, reconciled, nor reflected upon, certainly not within the Bretton Woods context. Even during the time of decolonialization after World War II, there was, among the colonial powers, no mainstream debate questioning the legitimacy of past (or ongoing) colonialism. Nor was there any effort to revisit that past, seek understanding, or even reconciliation. Rather, the emerging development doctrine provided by the Bretton Woods institutions (and the emerging international development agencies of OECD countries) offered an alternative interpretation that accommodated this blind spot. As a result, at least within OECD countries, there was little intellectual wrestling with the legacy of the colonial past. This contrasts with the “truth and reconciliation” approach initiated by Nelson Mandela for South Africa, which was an innovative and powerful attempt to revisit and overcome the wounds of apartheid, possibly the reason for avoiding a potential civil war. Nothing even remotely like that has ever been considered by governments of countries with a colonizer past.

The following example serves as an additional piece of evidence for how profoundly the colonial past has been ignored: a lengthy, documented conversation between two influential European progressives, the French ex-president Mitterrand and Eli Wiesel [19]. While they discussed in detail the horrors of World War II for the French and their home territory as well as the atrocities of the holocaust, they did not mention or reflect on France’s or Europe’s colonialism (pre- and post-war), and the millions of lives it cost. This is curious given that during the post-World War II independence struggles, for instance of Algeria and Vietnam, Mitterrand occupied ministerial positions and through those positions fought against independence.

Here I attempted to we identify the absence of recognizing, or even reconciling with, the colonial past as potentially the reason for social sciences ignoring physical reality. This focus on unreconciled colonialism is not to downplay the systematic

⁵ China, in contrast, having been subject to colonial aggression and having been isolated from the Bretton Woods debate for decades has still a far more resource informed economic development doctrine. Its five-year plans are filled with references to resources, environment, energy, or nature.

racism and atrocities of the Nazis. Rather, this acknowledgement helps us to pinpoint why modern economic and social theory emerging in high-income countries underplays the significance of society's physical foundation—ultimately to those countries' own peril. By being complicit in ignoring the wounds of colonialism, modern social theories including economics that lack a physical foundation, are ill-equipped for addressing the resource and climate dimension. More specifically, this active denial of the colonial era and its function to supply the colonial centres with resources, in my view, led to the inability of our modern policy apparatus to productively deal with Climate Change and resource constraints.

The underlying colonialist assumptions, though unspoken, are still accepted operating principles. For instance, resource security is nearly absent from any competitiveness or macro-economic discussion. Also, urban elites continue to assume that it will always be possible to maintain their privileged position of getting sufficient energy and resources from “somewhere else”. Both the rapid urbanization trends and the lack of concern among urbanists whether there will be sufficient natural capital to support the expanded urbanization serve as pieces of evidence that such colonial thinking is still prevalent.

This, hence, is what I offer as a **hypothesis**: the physics-devoid modern social theories (including economics, sociology, urbanism and political sciences) are a legacy of an actively ignored and covered-up colonial past. As a consequence, reconciling with, or at least recognizing, that past may be necessary to fully embrace again the physical nature of our individual and collective existence [6]. The benefit of such a reconciliation would be our ability to heal and upgrade economic thinking, so it can deal with the physical challenges our economies are facing. Such upgraded (physically informed) social theories would help us recognize that currently we live off depletion and that sustainability is a necessary ingredient for securing everybody's prosperity.

6 The Benefits of Reconciling with Our Colonial Past

Accepting our physical context will make the climate and resource challenge far more manageable. It would make obvious that to avoid dangerous Climate Change, humanity would need to be out of using fossil fuel well before 2050. If we embraced this reality, every mayor, minister, or CEO would start to ask themselves: How much of our infrastructure for 2050 is already built? How much of it is fit for this transformation? How much of our assets will be stranded? What are the needed action steps to strengthen our position in a world of Climate Change and resource constraints? CEOs might also ask: how will my company be relevant 20 years from now?

Accepting our physical context would make these questions obvious for anybody who is interested in their own personal success.

There is no other possible future for any company, city, country and humanity as a whole than to eventually live off the planet's regeneration, and not its liquidation. Our only choice is how fast we choose to transition away from an ecological pyramid scheme. The earlier humanity transforms, the more regeneration will be left. The earlier humanity curbs its demand, the easier it can fit within the planet's resource budget. Possibly even more importantly: Early adopters will be far better positioned to succeed: they will have their economy and infrastructure (roads, cities and power plants) adjusted in time. After all, it is a question of competitiveness. Others who start early will have a bigger struggle since our physical assets come with enormous inertia and take time to retrofit or replace.

Recognizing the significance of Climate Change and resource constraints for competitiveness means that companies, cities and countries would embrace, in theory and practice, that their own ability to successfully operate their economies hinges on their own ecological performance.

All this leads me to inviting you: What is your hypothesis about why collectively, we people have not been able to react meaningfully to the climate and resource conundrum? And how does your hypothesis contrast, contradict or complement the hypotheses presented here? Let me know, because I am deeply curious.

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