Denialism, greed, and ego: Evolutionary, but non-excusable challenges to living within sustainable boundaries

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The Evolutionary Human Challenge of Boundaries

Rockström et al. (2009) introduces the concept of "Planetary Boundaries" to explain that there are certain limits on how much human development can advance without aggravating many of Earth's processes to a point of irreversible damage. These boundaries have been applied to nine systems that exist within our biosphere, some of which include climate change, biodiversity, and ocean acidification (Rockström *et al.* 2009). The intention behind this concept is to create precautionary capacities for which humans can continue growth and development. However, the concept has been met with criticism regarding the likelihood of our human collectivity to express prudency in times of strongly capitalist economies. Scientist Stuart Pimm considers Planetary Boundaries a disillusioning concept and says: "So long as we keep human environmental impacts within 'planetary boundaries' we can have business-as-usual without jeopardising the ability of Earth's ecosystems to recover...[but] alas, all this is deeply flawed" (Braun 2017). In the conclusion of Rockström et al. (2009)'s article, the authors state that "The evidence so far suggests that, as long as the thresholds are not crossed, humanity has the freedom to pursue long-term social and economic development." In this essay, I will argue that their conclusion is profoundly incorrect, as it ignores humanity's evolutionary and biological cognitive constraints of denial, greed, and egotism that will essentially perpetuate the 21st century global change issues beyond the feasibility of such boundary thresholds.

The Ways of Evolution

Darwin's (1859) original theories of evolution and natural selection can explain how human cognitive traits have been passed down from our early ancestors. Traits are determined by genes and when certain traits allow individuals to survive and reproduce better than other individuals in a given environmental situation, the genes for these traits are passed down through generations, via natural selection. The process of evolution by natural selection means that as traits are, or are not, passed to the next generation, the frequencies of the genes providing those traits will change over time within the

human population. Professor Lonnie Aarssen (2015) argues how the mind's "Big Bang" is one of the most important moments in the evolution of the human species, as this was the time where our brains evolved awareness of 'self' and of time. With this new cognition, we understood that our individual existences on Earth were bound to come to an end, and thus we became anxious about our death. Our ancestors' mortality anxiety may have motivated a whole new range of behavioural traits that helped them to cope, and ultimately to survive longer and pass on these same traits to the next generation, which have now become problematic throughout western cultural evolution.

Deny, Deny, Deny

The human ability to deny certain situations may have been one of these behaviours that helped our ancestors cope with mortality anxiety. Earlier humans who were anxiously aware and awaiting death may have been able to survive longer by denying their impending doom (Dickinson 2009). Similarly, the Terror Management Theory explains how humans protect their sense of existence by denying anything that threatens it (Varki 2019; Harvell and Nisbett 2016). Therefore, early individuals who actively denied their reality, may have survived longer and reproduced more than those who accepted reality and succumbed to the stress of their impending passing. By way of evolution, the traits for denialism would have been passed on more than the traits for reality acceptance. However, denialism now seems to be a primary cause of inaction towards the current pressures we face in present day (Varki 2019). In particular, denialism may be the reason why many people are inadequately responding to climate change (Dickinson 2009). A study by Bloomfield and Tillery (2018), which is further supported by McCright and Dunlap (2011), found that climate change denial is prominent in conservative-leaning groups, as an analysis of certain social media communities revealed that many individuals seek to normalize denial and even consider acts of violence towards those who advocate for climate science. Denialism of such crises that are menacing to our own existence is present in various communities, and this may be due to our evolutionary past. However, this does not excuse the consequences of our actions. This concept demonstrates a grave situation, as many government and

corporate leaders may share these same denialist views, which then leads to a widespread, pervasive lack of accountability. As our reality is contested by such 'ignorant' perspectives among people in influential positions, our future is then limited, too. The denial of the climate crisis actively perpetuates the global changes we are creating, and it constricts our collective ability to accurately respond to the 21st century global changes. Alas, the idea of sustainable thresholds becomes unattainable.

The Danger of Greed

Greed may have also been one of these traits that has been favoured through evolution. In early unpredictable environments where resources are scarce and uncertainty is high, individuals would need to acquire as much resources as they could. A greedy attitude may have helped them fight for such resources, which may have elevated their social status and mate acquisition, thus increasing their overall chances of survival (Aarrsen 2015; Chen 2018). Furthermore, in the context of the mind's 'Big Bang' event, waves of awareness and anxiousness may have decreased early humans' ability to be happy. Early humans also started to question their purpose on this planet (Aarrsen 2015). Perhaps when we formed the ability to ask why we exist, we struggled to find a satisfactory answer, thus creating another form of anxiety (Aarrsen 2015). Therefore, focusing on obtaining resources could have then created a sense of happiness and distraction (and pseudo-purpose), and consequently an increasing drive toward even more resource acquisition. However, throughout time, advances in human cultural evolution may have caused greed to become maladaptive, as it is now creating many of the 21st century environmental situations, like consumerism and pollution. Sivaraksa (2003) suggests how "consumerism provides an artificial means to define our existence by suggesting that identity is realized through the process of acquisition," which implies that product consumption and the ability to physically hold material resources may be able to ease the anxiety surrounding our non-physical purpose of existence in life. Kaza (2000) illuminates the feeling of self-identity within product consumption as well, and also emphasizes how happiness with product consumption is only temporary which then fuels the excessive need to buy more to continually feel satisfied, even though most of the

products we buy go to waste (Orecchia and Zoppoli 2007). Consumerism is just one problem by which greed has now manifested itself within the 21st century. Correspondingly, Grof (1996) explains how this trait is threatening our very survival as "insatiable greed is driving people to hectic pursuit of profit and acquisition of personal property beyond any reasonable limits." Competition intrinsically intertwined with greed now fuels the continuity of globalization, a neoliberal capitalist economy, and technological advancements, which all perpetuate excess consumerism, resource extraction and exploitation (D'Souza 2015; Söllner 2014). These processes now fuel human 'progress', leading to the many environmental problems we experience such as biodiversity loss, land changes, pollution, and climate change (Mittal and Gupta 2015). Therefore, as long as greed continues to promote these processes, the concept of planetary boundaries up to which we can continue business-as-usual seems yet again illogical and unreasonable. Any sustainability threshold instituted as a level below which we must remain is likely to fail, unless our human progress is no longer equated with economic growth, and greed is transformed to generosity and moderation.

Esteem and Ego

Lastly, the characteristic of ego may have also been one of these traits that has been carried through evolution is responsible for our inability to operate and live below sustainability thresholds. Recalling once again the evolution of our self-consciousness, Dickinson (2009) argues that we evolved the ability to repress thoughts about death to avoid mortality anxiety. To repress such thoughts, "we use our unique self-awareness and imagination to create a fictional self through shared meaning, myths, cultural world views, and projects for building self-esteem" (Dickinson 2009). Therefore, ego can be considered as an irrational form of individualism, as it is a more elevated internal sense of self that is fabricated from 'outside-self' judgements, comparisons and perceptions. Ego can then be a fundamental trait underlying the behaviour of denialism, as we create false realities that act as safety nets to the anxieties of our identity and ultimate impermanency. Perhaps conservative groups deny climate change because it demonstrates how the fossil fuel industrial system that has historically been

advantageous for this group is unsustainable, and thus this denial is a form of "identity-protection" (McCright and Dunlap 2011). In addition, perpetuating the ego to avoid self-deprecation may also result in an increase in "status-driven consumerism, materialism, and other behaviours that increase carbon emissions" (Dickinson 2009). It is then plausible to assume that greed underlies self-esteem and ego (Seuntjens *et al.* 2014). However, ego does not always result in negative consequences, as many people find that they are able to increase their self-esteem through promoting sustainability and environmental awareness (Dickinson 2009). Even so, it is how the ego fuels the denial of our environmental situation and the corresponding desire for materials or economic wealth, that makes us collectively perpetuate environmental damage while also making us unable to adequately respond to them. Additionally, many discussions regarding the climate crisis reinforce the same idea, where values such as ego, denial and greed drive climate change and colonialism. For example, at the 2017 Onjisay Aki International Climate Summit, "many Knowledge Keepers described how these Eurocentric values have created a human condition—based on greed, anger, competition, selfishness, arrogance, ignorance, disrespect, and domination—which fuels destructive human behaviour and activities—such as extraction and exploitation of resources, war and violence, and pollution and manipulation of ecosystems" (Cameron *et al.* 2021). In terms of the Planetary Boundaries concept, the westernized ego disconnects us from nature and thus these thresholds of living may be perceived as attempts to limit the needs of ego advancement. Those who favour ego over humbleness may deem the thresholds a threat to their identity and thus once more, the boundary thresholds remain unattainable.

The Call to Change our Route

The inability to see the dangers of our progress and willfully act together as a collective species may be explained by evolution, but it is non-excusable. Rees (2010) emphasizes how such traits "have become maladaptive on a finite planet in the much-changed circumstances created by the expanding human enterprise itself." Denialism, greed and egotism may have been beneficially adaptive in early civilization, but now have become maladaptive due to the circumstances our actions have created (Rees

2010). As Ronald Wright states in the documentary film 'Surviving Progress': "We are running 21st century software - our knowledge, on hardware that has not been updated for 50,000 years, and this lies at the core of many of our problems." Our civilization has evolved faster than our brains can keep up, as there are now many outlets which our natural instincts can exploit, thus trapping us in our own 'progress'. Rees (2010) explains this exact problem, as we now must "confront the once-adaptive genetic predispositions that have become hazardous on a crowded planet, and abandon the socially constructed memes that reinforce them." With that in mind, Rockstrom's et al. (2009) statement about how humans have the freedom to continue the growth of civilization as we have always done, "as long as the thresholds are not crossed," is fundamentally inaccurate from a sustainability perspective. It is plausible that western denialism, greed and ego have been the underlying qualities leading to the current state of our civilization. Thus, having the freedom to continue as normal under proposed thresholds is neither feasible nor comprehensible, due to these exact behaviours. However, many Indigenous and non-Eurocentric groups have acquired sustainable, relational and holistic ways of living through cultural evolution and these groups should be the voices in leadership and governance to fully push for the paradigm shift humans need. Scientist and author Robin Wall Kimmerer (2012) brilliantly describes this shift, and states that:

> "We stand at a rare opportunity in time where the circumstances of humanity's weight on the planet catalyze an awareness of the shortcomings of the worldview that has brought us to the brink, both cultural and ecological. This has engendered an urgency to explore the wisdom in other knowledge systems as potential models that can guide cultural evolution toward sustainability...It is no longer more data or new technologies that are needed, although they have an important role. The transition to sustainability must be a cultural one, a shift in the fundamental relationship between people and land, from the dominant materialist mode of exploitation to the indigenous notion of returning the gift; of reciprocity."

Transforming western ideologies of denialism into acceptance, greed into gratitude, and ego into humility and wisdom, can essentially rewrite the dangerous direction we are heading into.

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