

# Interview with Guy McPherson about Anthropocene and Climate Crisis

**Erva Daninha:** First of all, we want to thank you for accepting this interview, Dr. Guy McPherson. Your scientific investigations into the climatic chaos within industrial civilization are of tremendous importance in pointing out the seriousness of the environmental crisis in the world caused by human activity.

So let's begin, you are known for defending the idea of Near-Term Human Extinction (NTHE). Can you explain to us what NTHE is and what are the main ecological indicators that support this theory?

**Guy R. McPherson:** Thank you for the opportunity to engage with you and your audience.

*Near-term human extinction (NTHE)* as a result of abrupt climate change refers to the rapid demise of our species, *Homo sapiens*. I have predicted NTHE for many years, and I have recently been joined by others in my prediction.

Humans are animals. As with other animals, our species requires hábitat to survive. Specifically, humans are vertebrate mammals. Yet the projected rate of environmental change, using the gradual rate of change projected by the *Intergovernment Panel on Climate Change (IPCC)*, outstrips the ability of vertebrates to adapt by a factor of 10,000 times (<https://onlinelibrary.wiley.com/doi/abs/10.1111/ele.12144>). Mammals will take millions of years to recover from the ongoing *Mass Extinction Event* (<https://www.pnas.org/content/115/44/11262>). I seriously doubt our species can avoid extinction even as non-human vertebrates and non-human mammals disappear.

At least seven species in the genus *Homo* have already gone extinct, even though none of those species were on Earth during a *Mass Extinction Event*. We are in the midst of a *Mass Extinction Event*. According to conservation biologist Gerardo Cellabos, lead author of a paper published 19 June 2015 in *Science Advances* indicating Earth is experiencing a *Mass Extinction Event* (<https://advances.sciencemag.org/content/1/5/e1400253>), “life would take many millions of years to recover, and our species itself would likely disappear early on.” (<https://phys.org/news/2015-06-sixth-mass-extinction-declares.html>). A paper with the same lead author published 25 July 2017 in the *Proceedings of the National Academy of Sciences* indicates Earth is well into the ongoing *Mass Extinction Event* (<https://www.pnas.org/content/114/30/E6089.short>).

A paper in the November 2018 issue of *Scientific Reports* indicates a 5-6 C global-average rise in temperature will cause the extinction of all life on Earth (<https://www.nature.com/articles/s41598-018-35068-1>). Such an increase in global-average temperature is expected shortly after the Arctic Ocean become free of ice, an event incorrectly projected to occur in 2016 + 3 years in the 2012 issue of *Annual Review of Earth and Planetary Sciences* (<https://www.annualreviews.org/doi/abs/10.1146/annurev-earth-042711-105345>). Despite this incorrect projection, an ice-free Arctic looms on the near horizon.

Commercial air travel poses an existential threat to all life on Earth. According to a paper in the 27 June 2019 issue of *Atmospheric Chemistry and Physics*, contrails alone could eliminate habitat for most, if not all, life on Earth by disrupting atmospheric circulation patterns (<https://www.atmos-chem-phys.net/19/8163/2019/>). This conclusion is supported by a study published online 12 December 2019 in *Earth and Space Science Open Archive* (<https://www.essoar.org/doi/10.1002/essoar.10501296.1>).

The standard response to the ongoing climate crisis is to recommend a reduction in emissions of greenhouse gases. However, reduced industrial activity translates to an abrupt reduction in atmospheric aerosols. These aerosols reflect incoming solar radiation, thereby keeping Earth cooler than it would be without these aerosols. Research on the cooling effect of these aerosols has appeared in the peer-reviewed literature since 1929 (*Angstrom, 1929, "On the atmospheric transmission of sun radiation and on dust in the air," Geografiska Annaler, 11, 156–166*). As little as a 20% reduction in industrial activity leads to a 1 C global-average temperature spike with a few weeks (*Rosenfeld et al 2019, https://science.sciencemag.org/content/363/6427/eaavo566*, and <https://www.sustainability-times.com/environmental-protection/research-cooling-from-atmospheric-particles-may-mask-greater-warming/>).

**Erva Daninha:** The well-known activist and writer Naomi Klein, unlike many climate deniers, argues that human activity is closely related to the climate crisis, however, she concentrates most of her efforts on painting capitalism as the great villain against the environment. Occasionally Naomi also criticizes the "industrial socialism" of some nations, but for the most part she defends the same thesis repeated by the great majority of leftists and ecologists around the world, "if we eliminate capitalism everything will be fine". Dr. Guy, we believe that your criticisms are broader, they target the global industrial complex and not just a specific type of social order. Why do you think that the global technological-industrial society is the real problem and not just capitalism?

**Guy R. McPherson:** As pointed out with abundant research by Tim Garrett, civilization is a heat engine ([https://faculty.utah.edu/u0294462-TIM\\_GARRETT/research/index.html](https://faculty.utah.edu/u0294462-TIM_GARRETT/research/index.html)). In other words, this set of living arrangements produces heat. It matters little or not at all how industrial civilization operates. Solar panels and wind turbines heat the planet, just as burning fossil fuels. Civilization takes us to a Pliocene-style climate as early as 2030 (according to a paper in the *Proceedings of the National Academy of Sciences* published 26 December 2018 that relies upon the IPCC's stunningly conservative *Representative Concentration Pathways*, <https://www.pnas.org/content/115/52/13288.short>). I cannot imagine humans or other vertebrate mammals could survive such a rapid rate of change. Yet, as I pointed out above, slowing or stopping civilization heats the planet even faster than keeping civilization running.

**Erva Daninha:** Among many others scenarios, we have the utopian and hopeful views defended by Naomi Klein regarding eco-socialism as an alternative to "save the world" of an ecological catastrophe, or a delusional "primitivist revolution" against industrial civilization defended by anarchists like Kevin Tucker and John Zerzan. How efficient do you think these systems would be when the global census predicts almost 10 billion people on the planet for 2050? We live on a finite planet with limited resources and most of these resources have

already disappeared, even a radical change towards a supposedly sustainable system would require other massive sources of energy, transportation or mass activities for food production, and even in more extreme cases like the "primitive utopia" defended by some anarchists, massive activity like feeding and housing, or whatever it may be, would have an enormous environmental impact on a large scale.

Nature tends to exercise a self-regulatory control over species on earth to enforce an organic coexistence, something that some call the trophic cascade, but our species has escaped this and has used the modern technology to its advantage to surpass the population control enforced by nature, manipulating its surroundings and expanding beyond its limit, whilst consuming nature indiscriminately and destroying great part of the limited resources on earth, all for its own benefit. Don't you believe that there is overpopulation in the world and that our modern culture is alienated and decadent and that given the amount of billions of people in the world, any proposal to create a global sustainable society would be flawed?

**Guy R. McPherson:** As indicated above, I seriously doubt we survive until 2030, much less 2050. Too many humans have been consuming too many finite materials for far too long. We have severely overshoot a sustainable population of humans on Earth.

**Erva Daninha:** You have stated on a number of occasions that the IPCC is quite conservative in its estimates. Do you believe that there is some kind of internal law within these entities or in the scientific community itself that establishes a pattern of behavior in order to avoid alarms that would have an impact on the economy or in society itself? For example, here in Brazil the *National Institute for Space Research* (INPE) released alarming data corroborated by NASA about the drastic increase of deforestation in the Amazon Rain forest in the year 2019, which resulted in the dismissal of Ricardo Galvão, director of the agency, at the behest of president Jair Bolsonaro. We believe that although they do warn about the climate crisis, these entities and most scientists operate within the same logic as that of the culture of industrial-technological civilization and defend the maintenance of this logic that in theory would be the essence of climatic chaos, then perhaps at the behest of governments (such was the case in Brazil), or by their own initiative, institutions handle their data carefully so as not to expose the infeasibility of this ecocidal social order. What do you think about this?

**Guy R. McPherson:** The IPCC uses a very conservative approach in creating their assessments. Scientists within working groups typically employ reticence in reaching their conclusions. After an assessment is drafted by conservative scientists who are required by the IPCC to rely upon consensus, the assessment is sent to governments for review. As you can probably imagine, the governments of the world are primarily interested in sustaining economic growth. "Saving the world" is not on the agenda.

**Erva Daninha:** Recently a Brazilian scientist revealed that Antarctica reached a surprising temperature of 20° C, something that was "never seen before". Such temperatures are harsh examples of global warming. The consequences of the temperature rise in these frozen environments are already well known, the rise of the sea levels is widely discussed in the scientific community, but the effects of the melting are not restricted to it. *Nature* magazine has already published a study in which it states that Antarctica is possibly retaining colossal amounts of methane gas produced over thousands of years within its ice sheet and that if this

gas were to be released, it would have an aggressive impact on the greenhouse effect. The same is true for the Arctic with permafrost, where the situation is perhaps even more serious, as the Arctic soil is no longer frozen. Studies indicate that the permafrost contains twice the total amount of carbon currently in the Earth's atmosphere, and that a massive leak of this material would be catastrophic for life on Earth, even being able to cause a mass extinction like that of the Permian-Triassic period. Do you believe that the "clathrate gun" effect could really endanger most life on earth up until the year 2040?

**Guy R. McPherson:** Not only do I agree, but renowned climate scientist James Hansen has discussed this possibility. A peer-reviewed paper by Hansen and colleagues indicated Earth was at its highest temperature with our species present in 2017 (<https://arxiv.org/abs/1609.05878>). Indeed, methane emissions from beneath ice and also methane emissions from the melting permafrost represent two of seven means by which the planet could heat very quickly, thereby destroying hábitat for humans (<https://weeklyhubris.com/seven-distinct-paths-to-loss-of-habitat-for-humans/>).

**Erva Daninha:** In 2014 at an interview with *Russia Today* quoting a study by the climate scientist Tim Garrett you said that only the total collapse of industrial civilization could prevent uncontrolled climate change. For logical reasons, a solution based on this premise will never come from any government or institutions like the UN. On the contrary, the weak *Paris Agreement* has already been abandoned by the United States, the biggest emitter of greenhouse gases of all history, and the Brazilian State has also shown signs of its intents to abandon the agreement. Studies like the one of the *Universal Ecological Foundation* have already pointed out that the agreement won't be enough to limit the temperature increase to between 1.5° C to 2° C in relation to the levels of the pre-industrial era. Assessments such as yours indicate the possibility of an increase of more than 3.5° C in a short period of time. Stopping industrial activities is unthinkable in the modern world, as this would mean to deny the very logic in which most countries are inserted in, however this does not mean that scenarios like this one are impossible to achieve, only not through the action of governments, of course.

At the end of last year, Houthis rebels attacked the world's largest oil refinery in Saudi Arabia with drones, interrupting half of the kingdom's production, which supplies 10% of all oil consumed in the world. Although extreme, this is a real example of the abrupt interruption of an activity that is harmful to the environment. Groups like the *Niger Delta Avengers* have also caused catastrophic damage to oil production in countries like Nigeria. Studies published by the magazine *Science Advances* also concluded that the war in the Middle East caused pollution to decrease in some areas of that region, because the levels of industrial activity decreased and activities of urban life such as driving were affected. Leaving aside all judgment that could be made regarding this type of action and considering the fact that urgent actions to interrupt industrial activity are needed and governments will never offer them, do you consider that there is practical efficiency in this type of action to interrupt pollutant emissions or destruction of the environment in the world? I say it again, I ask from a purely practical perspective, leaving aside the judgment as to whether it is legal or illegal.

**Guy R. McPherson:** Please see preceding information about the aerosol masking effect.

**Erva Daninha:** Dr. Guy, the world is currently facing a COVID-19 pandemic, one of the most catastrophic in recent times. The attention is practically all focused on the economic damage caused by this situation, there is a lot of talk about a new economic recession in the world and a global financial crisis similar to that of 2008, but little is said about the benefits of this pandemic to the environment. You yourself said that total interruption of industrial activities are the most beneficial events that can contribute to the non-rise in global temperature and that is exactly what this disease is causing.

In China, there was a major paralysis of the economic activities and the reduction of polluting gases was huge and abrupt, in February this year the concentration of these gases was 25% lower compared to the same period last year, according to the *Center for Research on Energy and Clean Air*. In Italy, with tourism reduced to zero, the waters of the Grand Canal in Venice looked better and the air quality improved in the area, according to the city hall. Data from the Sentinel-5P satellite of the Copernican program at the *European Commission* and the *European Space Agency (ESA)* showed that in general terms pollution had a strong decrease in Italy, especially in the northern region of the country, the ones that were most affected by the virus. Certainly the same is repeating in various regions around the planet, and not only because industrial activities have been paralyzed or reduced, but also because tourism, transportation and many other daily activities within the technological-industrial civilization have ceased.

Based on this, how do you see these major disasters and their environmental benefits? We believe that they contribute in curbing the global climate crisis and indicate that, for the planet, our civilized lifestyle is just as bad as a pandemic to us. We also think that disasters can function as a self-regulating catharsis from the earth trying to dismantle the harmful modern lifestyle and the great techno-industrial civilization.

**Guy R. McPherson:** Actually, I have revised my assessment regarding the horrors of industrial civilization, as I have indicated above. Industrial civilization fouls the air, dirties the water, and washes soil into the ocean. Industrial civilization is a plague on the living planet. Yet, from the perspective of abrupt climate change, maintaining civilization helps to retain habitat for humans on Earth. In our absence, the world's nuclear power plants will melt down catastrophically, thereby leaving the planet bathing in ionizing radiation. I suspect such an event will destroy habitat for all life on Earth within a few generations after the lethal mutations begin.

**Erva Daninha:** today we see the rise of a global "*Green New Deal*" through new movements like Extinction Rebellion and Sunrise Movement and also by climate activists such as Greta Thunberg. For the uninformed it looks like something new, but the same thing happened in past times with several NGOs, with emphasis on Greenpeace, which over the years reduced its activities to peaceful performances to be registered and disseminated on social media, campaigns to sign petitions to the government and an intense greenwashing activity to promote supposedly sustainable consumption.

The great eco-organizations of the past are promoting a discourse of "*individual change to change the world*", the famous "*do your part*" activism, since they were accepted and

incorporated within the very logic of the system that they criticized, such is the case for Greenpeace, which made pacts with oil, timber and fishing companies, in addition to many others. Extinction Rebellion has a very youthful and attractive appearance, the movement attracts enough people to shout against global leaders and demand changes in environmental policies around the world, respecting the limits that the order imposes on them, indirectly using the same logic that they oppose to and expecting from global leaders the longed-for changes in environmental policies, the same leaders who demonstrate that they are unable to comply with basic agreements like the one in Paris. Don't you think that there is naivety in these movements and that instead of addressing the root of the problem they indirectly advocate for reforms and perpetuate the destructive industrial civilization? If they are not fighting for the end of industrial society, but for the existence of a "better industrial society", wouldn't this struggle be a big problem and a mere greenwashing?

**Guy R. McPherson:** These movements are exceptionally naive. As I indicated above, industrial civilization is a heat engine, but slowing or stopping industrial civilization heats the planet very quickly. This represents a classic Catch-22.

**Erva Daninha:** A UN report released last year, probably conservative in terms of numbers, said that one million species of animals and plants are at risk of extinction. The main cause indicated by the report is industrial agriculture, pollution and the warming of the oceans. Many scientists point towards the same, do you also believe that we are currently experiencing the sixth mass extinction? This would be the first human-made mass extinction, right? Would Anthropocene be a suitable term?

**Guy R. McPherson:** Earth is in the midst of the *Seventh Mass Extinction*. We have long believed we were in the *Sixth Mass Extinction*, but a paper published in the peer-reviewed *Journal of Historical Biology* on 5 September 2019 indicates an additional, previously unknown *Mass Extinction Event* (<https://www.tandfonline.com/doi/abs/10.1080/08912963.2019.1658096>). That minor point aside, the ongoing *Mass Extinction Event* is generally termed the *Anthropocene Mass Extinction* because it results from human activities (notably, industrial civilization).

**Erva Daninha:** Mark Boyce's study published in the *Journal of Mammalogy* on the experience of reintroducing wolves in the Yellowstone National Park reinforced what many already knew, nature is interconnected and interdependent with the species that live in it, be it animals, plants, fungi, whatever it is. If a single animal disappears forever, the entire trophic cascade is destabilized and the consequences can be immeasurable.

Currently, all terrestrial biomes are threatened by the advance of civilization and the speed with which species are going extinct is a thousand times above normal, according to a study by *University College London*. This massive extinction endangers the life not only of the species, but of the biomes themselves. The marine biome, perhaps the most important one for life on earth, is rapidly disappearing. Insects vital to earth cycles, such as pollinators, also die in catastrophic quantities. Do you think that this massive extinction wave can reach the human species itself at some moment?

**Guy R. McPherson:** Several other species in the genus *Homo* have gone extinct. Indeed, all

individuals die and all species go extinct. The 13 November 2018 peer-reviewed paper in Scientific Reports indicates all life on Earth will go extinct with the kind of temperature rise forecast in the near future, largely as a result of co-extinctions (<https://www.nature.com/articles/s41598-018-35068-1>). In other words, species such as ours that rely upon other species for our own existence, face an existential risk specifically because we depend upon other species. The ongoing insect apocalypse, the rapid rate of environmental change, and our membership as life forms on Earth guarantee our near-term demise.

**Erva Daninha:** You are sometimes singled out within the scientific community and within the world of ecological discourse as someone who is tremendously pessimistic and hopeless. We think of you as someone who is just realistic and well informed. It's reality itself that's pessimistic and full of bad news for humanity's future. Last year a text called "*Hope is a Mistake and a Lie*" was published on your website, in which you destroy the hopeful behavior about the future of our species. Dr. Guy, don't you think that there is a bitter difficulty within the scientific community, and among militants and activists, normally anarchists and leftists, to accept the reality about our future and understand the fact that better days will never come?

Us in particular are very realistic (and also pessimistic) about the future of our species and we believe that as humans we draw our own end and that we will reap the consequences of the ecocidal structure that homo-sapiens has erected. This allows us to deal with reality in the hardest, coldest and most necessary way. Naive activists shout for their political leaders to adopt new environmental policies, anarchists and leftists already seem to know that there is no way out, but they prefer to deny it with all their strength and cling to comfortable utopian dreams that can not be achieved. Hope is like a drug and these types of people are addicted, they cannot accept the dark days to come, so they run in circles, because to renounce hope would be to renounce humanity itself and everything it has created until today. What do you think about this?

**Guy R. McPherson:** The society has promulgated the idea that hope is universally good. I believed it for a long time. Then I looked up the definition of the word in the dictionary. As you indicated, I prefer reality to wishful thinking. And hope is one version of wishful thinking.

**Erva Daninha:** Dr. Guy, what do you think about the anthropocentric perspective of the world? This type of thinking that places the human being at the center of everything and gives it more importance than other species is present even in the contemporary schools of thought that present a radical ecological critique, such is the case with eco-anarchism. We believe that the human being is just one more species among the thousands that exist, and perhaps is not even that important. The life-death cycle is constantly present in nature and it's a part of the life of any living being, beings are being born and dying all the time. The modern human being denies death and always seeks to extend its existence. It is not wrong to say that the evolution of medicine, especially modern medicine, which has provided humans with such longevity, has caused them to mock natural selection and to expand at a very accelerated pace. Today the techniques of biotechnology and nanotechnology flirt with immortality. We believe that this type of thinking has also influenced humanity's capability to

reach a higher degree of ecocide on earth and it's the basis for the values that support civilizations. What do you think about this?

**Guy R. McPherson:** I could not agree more. *Homo sapiens* represents one species among millions to occupy Earth. We have created environmental conditions contrary to the continuation of life on this beautiful planet. We strive for immortality at the level of individuals and at the level of our species. To the contrary, acceptance of one's own death is a gift filled with peace. The same sentiment holds true at the level of our species.

**Erva Daninha:** Dr. Guy, is there a possibility that global warming could reveal to the world something as serious as the current coronavirus pandemic? Recent news showed that the melting in the Arctic and other frozen regions was resulting in the reappearance of bacteria and viruses considered to be extinct and also had the possibility of bringing back prehistoric bacteria and viruses of unknown pathogenic capacity. The magazine *Scientific Reports* has already published that the melting of the ice in the Arctic has released a virus normally found in the Atlantic that has contaminated sea otters in Alaska. We think that pathogenic super-microorganisms could, through the melting at the extreme poles of the earth, reach the coasts of several countries and start pandemic infections as occurred with the coronavirus on China, which could have started on a seafood market. Based on your experience as a researcher, do you believe that this possibility is real?

**Guy R. McPherson:** There is little question about the interaction between climate change and COVID-19. Most notable are (1) the potential for a reduction of the aerosol masking effect as industries slow, and (2) reappearance of many viruses as a result of melting ice (accelerated by climate change). Twenty-eight new virus groups were found recently in a melting glacier (<https://www.popularmechanics.com/science/health/a30643717/viruses-found-melting-glacier/>). The novel coronavirus currently in the news is the first of many such difficulties we face.

**Erva Daninha:** A survey by the science magazine called *Advances in Atmospheric Sciences* revealed that 2018 was the warmest year on record for ocean temperatures since monitoring began. Many people erroneously claim that forests are the "lungs of the earth". Although important for oxygen production, carbon absorption and climate regulation, forests do not produce most of the world's oxygen, the oceans do. What happens is that with global warming the temperatures in the oceans are increasing since more or less 93% of all the heat from climate change is absorbed by the oceans.

Biomes and marine fauna are extremely sensitive to climate change, and it is not only climate change that attacks the seas, but also pollution (including noise pollution from boats and submarines), industrial fishing, tourism, etc. The world's oceans are in a very delicate situation, and unlike a terrestrial ecological reserve, where human destruction can be easily controlled and with great effort, reversed, what happens in the seas is that mitigation actions are out of control. Although possible, it is not easy to "plant" marine corals, planting grass is not the same as "planting algae", although there are bizarre geoengineering experiments that propose this (which could be more disastrous than efficient). What diagnosis would you make out of the situation of the global oceans and what can happen if they continue to lose marine life?



**Guy R. McPherson:** We are products of the ocean. All life is dependent upon the ocean. Paul Watson, author and founder of the *Sea Shepherd Conservation Society*, says it best: “We cannot live on this planet with dead oceans. If our oceans die, we die.” We are in midst of the a global coral bleaching event, the third one in history. It is also the third one since 1998. Deoxygenation is a pressing problem in marine systems right now. I present abundant evidence from the peer-reviewed literature: <https://guymcpherson.com/2018/12/ocean-deoxygenation-as-an-indicator-of-abrupt-climate-change/>

**Erva Daninha:** Last year, an unreliable study by the Science magazine revealed that to limit the increase in global temperature to 1.5° C (Paris Agreement target) 1.2 trillion new trees would be needed worldwide, and the study advocated the indiscriminate planting of trees to absorb and reduce excess carbon dioxide in the earth's atmosphere. We think that the study is unreliable because it presents only the quantity as a solution, without thinking about the complexity of the process and its side effects. The indiscriminate planting of trees, according to what we have read in the scientific literature and also to the opinions of scientists, such as that of the Brazilian Gerhard Overbeck, who refuted a proposal like this one from the Federal Institute of Technology in Zurich published in the article *The global Tree Restoration Potential*; can have environmental consequences. From our point of view, planting trees indiscriminately seems irresponsible and inconsequential. Nature is complex, self-regulating and interconnected, nature is not just quantity, but complexity. Biomes cannot be generated abruptly and in the long run the massive planting of trees could also bring environmental consequences such as depletion of underground water reserves, migrations or extinctions of species of animals and plants, etc. What do you think about this proposal of massive and indiscriminate planting of trees to reduce the amount of carbon dioxide in the Earth's atmosphere?

**Guy R. McPherson:** This is a terrible idea. I wrote about it here: <https://guymcpherson.com/2020/02/can-trees-sequester-enough-carbon/>

**Erva Daninha:** Theodore Kaczynski, best known as the Unabomber, once wrote a text called “*The Ship of Fools*”. The text is metaphorical and very intelligent, it places the “ship” as our civilization, and the crew as the social figures that stand out the most in public complaints. In the story, the captain of the ship, who represents political leaders in the real world, is a very vain and confident person, as well as the crew, so they madly decide to travel in murky waters, towards dangerous icebergs. In the text, the captain, supported by his crew, leads the ship, which symbolizes civilization, towards increasingly dangerous waters, something that could easily result in the sinking of the boat if it crashed into icebergs. The dangerous waters in the text clearly symbolize the wrong course that our species is taking, and icebergs would be the end, the extinction. In the tale, while the captain steers the boat towards the icebergs, the crew begins to complain about various problems on the ship. There is the poor crew member who complains about earning little, there is the female crew member who complains about the inequality between women and men on the boat, there is the immigrant crew member who complains about the inequality in the treatment of foreigners, there is the crew member who is an Indian native who complains that the white stole their land and that is why he ended up on that ship and shouldn't even be there, there is the gay crew member who complains that he is discriminated for his sexual preferences, there is the crew member who

is vegan and who complains that the animals on the boat are being abused, there is the crew member who is a university professor and kind of an intellectual who defends and supports all previous complaints, and there is also another crew member, an individual who is being ignored by all the previous ones, and who says that while everybody complains about what bothers them, the ship is heading towards icebergs and that could kill all of them very soon. As the tale goes on, the complaints continue and the captain attends to each complaint little by little, granting more rights to stop the protests and calm the spirits. The same scenario is repeated a few times and the captain always manages to calm his crew down by granting them a little more rights, but without ever turning the boat's course. At the end of the story everyone is more or less satisfied with their achievements, which are not big, but are significant anyways, and suddenly the boat crashes into a huge iceberg and everyone dies.

Dr. Guy, we believe that it does not take much effort to understand that this story perfectly reflects the critical situation in the world, with the serious ecological crisis underway, demagogue political leaders, social movements and their complaints, and that one percent who realizes about the delicate situation we are in and tries to alert about the ecocide or to act on their own way against the climate catastrophe. Do you believe that this tale lucidly reflects the reality of the world and the existing social movements?

**Guy R. McPherson:** Yes, without question. Kaczynski was well ahead of his time.

**Erva Daninha:** The respectable Brazilian scientist Antonio Donato Nobre published in 2014 a report called *"The Climate Future of the Amazon"* that points out that due to deforestation and degradation, the Amazon forest could be close to what he calls the "point of no return", when it's no longer able to regenerate on its own and begins to move towards total desertification. Since then, six years have passed and deforestation has intensified considerably, especially after the election of Jair Bolsonaro and the management of Ricardo Salles, Minister of the Environment. In other tropical forests of Asia and Africa the unfolding is the same, there is intense deforestation, according to some scientific reports. Tropical forests are extremely important in the world, they help to do things like regulating the climate and the rain cycle, so if these forests disappear the rains could also disappear and a myriad of ecosystems would be affected, perhaps extinguished. Dr. Guy, do you think there is a possibility that in the short term we will see a severe process of desertification in the world? This process is already happening in the world, including here in Brazil, especially in the northeast and northern regions of the country, but do you think that the world's tropical forests can reach the "point of no return" and collapse at the point of becoming deserts, as Dr. Antonio Donato Nobre defends?

**Guy R. McPherson:** The ongoing exploitation of the Amazon is emblematic of our rush to greed. There are many examples of forests turned into deserts by "civilized" humans. The Amazonian example follows other previous examples in the Fertile Crescent, much of the Middle East and northern Africa, and so on. Given these examples, we can expect a similarly dire outcome in the Amazon.

**Erva Daninha:** Dr. Guy, a study by the *Rights and Resources Initiative (RRI)*, *Woods Hole Research Center (WHRC)* and *World Resources Institute (WRI)* indicated that indigenous reserves hold 24% of the carbon stored on the terrestrial surface. The native peoples have different perspectives of existence and a different relation with the land, that is why they

preserve it, they preserve it because they consider it to be sacred and because it is from it that they directly get their food, from hunting and gathering. Preservation is just a consequence, a beautiful and intelligent consequence.

We believe that there is a cultural crisis within civilization, especially with the arrival of the ultratechnological and cyber-connected modernity. Our diet, sleep patterns, cacophony, repetitive routine, types of work, the pressure from the family, work or society itself, over and under protection of the family, physical inactivity, obesity, cancer, epidemics and pandemics, "infocalypse", social isolation on social networks, confinement, the artificialization of everything, vision pollution, the grayness of the cities, the speed at which everything goes (days, information, people, etc.), the climate changes that influence our disposition, social control, surveillance, pornography, advertisements, trends, traumas, abuses, drugs, ideologies, abstraction, loss of identity, loss of roots, liquidity of social, familiar and loving relationships, violence, police, prisons, wars, psychological illnesses, disorders, anxiety, depression, suicide, fear. We believe that a great part of all these problems comes from civilized life and its values, beliefs, routines and behaviors, especially modern life, and that these problems will only get worse over the years, and possibly even in the scenario of some socialistic, vegan, anarchistic or permacultural society. We don't know if you have ever experienced this, but when we walk through a forest and feel its serenity, the smell of wet earth, the noise of the animals, everything seems to be fine, as if it were therapeutic. Perhaps it is ancient information contained in our DNA that brings back the memories of ancestral life in the forest. Some of us are direct descendants of native tribes and Quilombolas or have strong ties to what is left of these ancestral cultures and we feel that the solution to the global ecocide and the cultural crisis in civilization is not to think ahead, but to look back, to our past, to the ancestral way of life, at their respectful relations with the land, which is the reason why the indigenous people preserve their reserves and consequently they can absorb carbon. We are not naive, we do not romanticize tribal people and much less believe in a "primitive future" as the one preached by anarchists like John Zerzan and Kevin Tucker, nor do we think that it would be healthy for any ecosystem that a large part of the world's population would change their lifestyle to a primitive model to "save the world". With the number of humans that exist today on earth, we believe that no model would be sustainable in the long run. What we believe is that in another reality (currently existing) far from civilization and mass society, the wisdom and way of life of ancestral peoples really demonstrates the possibility of long-term coexistence with nature, where there is a future not only for the human species, but for all others. Of course, that is not what the future currently holds for the human species. But regardless of the end that is getting closer, what do you think about this idea of looking back, to ancestral times, and not further away to the future?

**Guy R. McPherson:** Absolutely. Many pre-civilized societies learned and practiced sustainability to a far greater extent than contemporary humans, as pointed out by *Turnbull (The Forest People [1961], The Mountain People [1972]) and Quinn (Ishmael [1992], Beyond Civilization [1999])*. A classic and often-cited example is the Iroquois Confederacy making decisions only after considering the impacts seven generations in the future. *Padgett* provided an education-based overview in 2018 ("*Sustainability of Education: An Ecopedagogical Approach,*" *Journal of Sustainability Studies* 1(1), Article 5, <https://ir.una.edu/sustainabilityjournal/vol1/iss1/5>). Clearly, learning was an important part of everyday living for the *Iroquois Confederacy* and other pre-civilized societies. In contrast, the

evidence presented herein indicates that contemporary humans have not learned to practice sustainable actions.

**Erva Daninha:** You say stopping industrial civilization abruptly will bring the immediate demise for human life on earth, and maybe all life. But letting it go on, will have the same consequences, maybe twenty or thirty years into the future. So... What should we do? What do you propose? What's your personal stance on this?

**Guy R. McPherson:** The certainty of death, coupled with the absurdity of life, helps me live with urgency and authenticity.

I am asked nearly every day for advice about living. I recommend living where you feel most alive. I recommend living fully. I recommend living with intention. I recommend living urgently, with death in mind. I recommend the pursuit of excellence. I recommend the pursuit of love. It's small wonder I am often derided, mocked, rejected, and isolated by my contemporaries in the scientific community.

Pursue right action. Do not be attached to the outcome.

In light of the short time remaining in your life, and my own, I recommend all of the above, louder than before. More fully than you can imagine. To the limits of this restrictive culture, and beyond.

For you. For me. For us. For here. For now.

Live large. Be you, and bolder than you've ever been. Live as if you're dying. The day draws near.

**Erva Daninha:** Dr. Guy, we appreciate the opportunity to interview you. It was a pleasure. If you want to leave a message feel free to do so.

**Guy R. McPherson:** Thank you. I appreciate the opportunity to inform people about the world we occupy.