

The background of the cover is a blue-tinted photograph of a tree trunk, showing the texture of the bark and the growth rings of a knot hole. A large, semi-transparent question mark is overlaid on the right side of the image. The title 'The Next Millennium' is centered over the tree trunk.

The Next Millennium

Patrick C Fingas

The Next Millennium?

Climate, Humanity & Survival: An Exploration

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Royal College of Art

Critical Historical Studies Project

Environmental Architecture M.A.

2021/2022



Royal College of Art

*We can believe in the future and work to achieve it
and preserve it, or we can whirl blindly on, behaving
as if one day there will be no children to inherit our
legacy. The choice is ours; the earth is in balance.*

'EARTH IN THE BALANCE' (2013)

**Al Gore, 45th Vice President of
the United States of America**

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Acknowledgments

‘The Next Millennium?’ is the fruit of many labours and has been motivated by people who have supported me, not just today or this year but throughout my entire life some of whom are no longer with me, though they will always be with me in memories. It is those activities and individuals which have led me to attend the Royal College of Art and pursue this course. Indeed, were it not for the tireless work of my parents and the huge family support that I receive, I simply would not be here today - literally. Additionally, I owe all my teachers (from Primary School onwards) my heartfelt thanks for the enormous amount of work they have all helped me through to get to where I am today. I hope some of you will be able to read this some day and know of my gratitude.

I would never have thought that I would ever be here, following a Masters degree at the Royal College of Art, whose teachers have presented us with extraordinary work and have opened my eyes on the world we are all sharing.

Last but not least, a massive thank you to all of you who have participated in the creation of this project, some of whose life experiences have helped to animate this text with their stories and experiences. Exchanging thoughts, sharing knowledge and exploring the opinions of many different parties has been an elementary aspect of focus throughout the creation of this work.

Patryk C. Fingas

Opening Words - A World in Danger

Since the 'Industrial Revolution' of the 1800s, our planet has been subjected to greater and greater intensification of fuels burning, from century to the next. On the one hand, what was meant to improve everyone's living standards and human life on this planet, has ended up damaging the environment and the planet's health overall.

Planet Earth is the only known planet in close proximity to the Sun that can support humans with the oxygen necessary to breathe, clean water to hydrate ourselves and foodstuffs that can fuel our bodies and lives. The Industrial Revolution was meant to have improved our living conditions, enabling readier access to sustain civilised living essentials, such as a house, food and drinking water at a bare minimum.

However, the Revolution has led to dominating anthropocentric behaviours - where we put *our benefit* above everything else - ultimately leading to the destruction of the homes and habitats of the most vulnerable, non-speaking yet co-existing (with us) creatures, starting from the smallest plankton and ending with the largest mammals, like elephants or whales.

Adam Smith, in 'Moral Sentiments' (1759) stated that: "*Though our brother is upon the rack, as long as we ourselves are at our ease, our senses will never inform us of what he suffers*".

Like in the metaphoric concept of 'brother', we will not understand what Earth is going through as there is no way we ourselves can experience what is

being done to the Earth as we are the ones who have enforced upon it intensive (and excessive) extractivism for a capitalistic increase of production.

The IPCC report, published in 2022, states that between 1990-2022 we have destroyed over 420 000 000 hectares of forest, 90% of which was classified as 'tropical' and sustaining some of the greatest ecosystems on our planet. In that same report, Jenkins (2013) reports that: "looking at trees alone," tropical forests hold "over 53,000 varieties of trees", which gives some idea of the multiple varieties of damage and destruction being caused. What is worse, it has been found that 80% of the deforested lands are turned into intensive agricultural production fields, so there is no chance that the trees will be replaced in those areas.

From my perspective, we, as human beings, during our time of evolution, have built a 'Berlin Wall' which separates us and divides us from nature. We appear to have diverted our thinking of the planet as our host, instead putting ourselves at the top of the hierarchy and then failing to look after this world. As a result of our capitalist politico-economic structures, perhaps, we have become so self-focused, caring only about our own only needs, that we have forgotten about Planet Earth as if it were not there. It is apparent to me that the extractivist nature of our being seems to be an irreversible process, one which we feel must continue as it has done in order to sustain our lifestyle. Yet at the same time, we do not seem to feel the urge to repair what we have destroyed, even if that will more likely lead to a better tomorrow. We take and take, or take and leave, or take and change, simply according to our needs, thinking that we have done no harm to our closest relative - *Nature*.

Through the explorative work presented in this portfolio, I want to consider our planet as being on a level equal to us, making Earth like our husband/wife/child/grandparent or simply a friend who is in pain - part of the battle of Life in which every single breath is a miracle.

How would you react knowing that someone you love is struggling and fights for every breath? Would you simply let him/her struggle by themselves in silence, or would you physically try to help them to the best of your ability?

Do we have the right to live like we are, ignoring the plight of the Earth and taking from it without giving back what we have taken - are we just a reproductive pest that has lost its sense of existence and harmony with their surroundings?

We may be masters of our planet, one which we have turned into an 'anthropocenic' one, but what good is that if our disrespect of nature will lead to our own ultimate destruction through destroying the balance of the climate?

'The Next Millennium' really does appear to have a question-mark besides it - a question mark concerning our impact on its climate and humanity's very survival.

Introduction: Literature of Ecology

Climate change is not caused by any individual person, single country or continent. Climate change is a broader environmental consequence of many factors, one which touches every person, no matter what is their geolocation. This is a complex mechanism which does not have a one simple cause or solution and real change is not likely to be brought about by any single action.

Felix Guattari, author of 'The Three Ecologies' (1989), speaks about the three levels of ecological networks which correlate with one another, these being the mental, social and environmental. Despite presenting a much broader and far more complex network of relations, Guattari simplifies the interconnections in order to expand upon observations widely within the three identified areas - this work of his has been responsible for influencing the base of my research during this portfolio project.

Albena Grabowska is the writer of 'Stulecie Winnych' ['Centenary of the Guilty] (2021), a trilogy created through research on a well-known family that lived in Brwinow, a village located near Warsaw. The work created by Grabowska has influenced the physical structure of my own project. That trilogy came about by visiting the places where the family lived and through accessing a series of letters which then formed the basis of the plot's narrative. Those books are a combination of geographical and family history, forming a blurred balance between non-fiction and fiction making the books accessible and relatable to a wide range of readers. Her methodology and approach - in addition to her end-results - went some way to reassuring me of the slightly

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unconventional structure that I have adopted with the current work. Through the experimental structural format chosen, I hope that the reader will be able to approach this work not only on an analytical, critical level but also in an experiential and emotional manner.

Keith Oatley, author of 'The Language of Emotions' (1989), at the outset of his book refers to emotions as a: "*sequence that includes an eliciting condition, a cognitive evaluation, physiological activation, a change of action readiness, and finally an action*" Through emotional connection with the text and through making connections with our joint past, a text can sometimes speak louder to the reader, managing better to reach his/her cognitive awareness, through which the reader is more capable of understanding the message of the text on a personal level directed at them. Theories have emerged since the early 1900's, when the theoretical development of behaviourist teaching methodologies found an interconnection between human environmental conditioning and the cognitive processing of information.

Kees Kaizer, writer of 'Social Norms and Pro-Environmental Behaviour' (2019) brings to his analysis work on how "norms" influence our behaviour, bringing to bear significant research by theorists such as Sherif (1936), Asch (1951) and Nolan *et al.* (2008) - ultimately identifying human fears as "social sanctions" that are the means by which one makes changes in one's behaviour. This is especially so when perhaps the only right approach, to a given situation, would be exposure - standing alone. Our fear of standing alone forces us to go with the crowd, despite other personal opinions we may have.

This phenomenon forms a barricade, where cultural actions have the potential to block individual changes which often could be the seed of a better

future. That theory supports the complex relationship being explored between social and environmental ecologies in the work of Felix Guttari (1989), where he himself provides justifications for his explorational structural methodology, stating that change requires a “global” approach to “political, social and cultural” ecologies. The effects achieved by ‘fictive personification’ of the planetary systems and global scale factors - which are played with in this short project - aim to appeal to a wide range of personalities, aiming to find factors which can make the reader connect to the text itself, the planet we live on and other humans and non-human beings who live here. I hope that this approach has enabled space for thought on a more global scale, considering the connections that exist between one another despite inevitable differentiation on cultural, political and existential levels, for the Earth is in fact the major interlinking that makes us all relatives in spite of all the differences which may appear to separate us at a surface level.

Part 1

Letters from Earth

Planet Earth

[Letter #1]

Exp: The Sun

Fao: The World

Re: Climate Change

01-05-2002 A.C.E.

Dear Sun,

Your powerful rays have, for decades and centuries and millennia and epochs, allowed me to thrive. I have sustained vast biodiversity and enabled increasing industrialisation to benefit human welfare across the globe. Suddenly however, and most recently, I have fallen ill and I have been feeling much worse than I ever have before! My body aches from the stress and distress caused by the activities of the human population!

Breathing is becoming more and more difficult, for the increasing air pollution and greenhouse gases - which my people were warned about many times, are causing many issues, one of which is the worrying increases in temperature. 'World in Data' in 2017¹ estimated that since industrialisation

(1850) my temperature has risen by approximately +1°C. Following the reading of that data, I have found that 'The Intergovernmental Panel on Climate Change' [IPCC], have warned that the greenhouse gases, causing the planet to warm gradually, have been driven predominantly by "economic and population growth". The IPCC have stated that: "This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years" ! Oh sun, oh Sun - what should I do now Sun? If humanity is destroying me by allowing all this to continue, what I am meant to do to prevent it?... How can I stop this without destroying the entire economic, environmental and social ecology? If I stop the entire line of industrialisation, my people may be exposed to tragic economic crises, poverty, misery - my people will be subjected to mass death rates or - in the best scenario - drastic changes of lifestyle will be enforced on them, changing their lives beyond all recognition.

Climate change ² has already made profound changes in my well-being and that of my guests, so I will try to explain more about this in forthcoming letters. I will try to explain to you the effects of climate change and what is causing it. I will endeavour to tell you more about the effects of climate change that we appear to be suffering and to identify the human activities that are worsening my well-being, damaging the livelihood of animals and leading to their mass extinction.

Perhaps something can still be done!

Yours worriedly but sincerely,

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Planet Earth

[Letter #2]

Exp: The Sun

Fao: The World

Re: Climate Change

20-09-2012 A.C.E.

Dear Sun,

I've been told that I'm so strong, that I'm brave beyond compare and that nothing whatsoever can hurt me, that I'm a sacred beast that cannot ever be hurt or destroyed! The truth is that I am now barely standing on my own two feet!! The altering climate - which is increasing my temperature and ever accelerates with the vast expansion of global industrial pollution - melts my ice supplies at the North and South Poles³, which then affects the rise of sea level, causing the worrying increases in the salinity in my body's veins! Melting of my reflective coat - that helps me to control heat intake - is disappearing, stripping

me of the protective shell that has been essential throughout my life thusfar!

The melting of my ice caps looks like it is about to demolish the homes of so many millions - perhaps billions - of my good but heedless people! Polar bears, due to the effects of their lost habitat, are already struggling to make the living they used to. Many end up dying from hunger, I am hearing. Indeed, the World Wildlife Fund ⁴ writes that: "Forty percent. That's the stunning population loss for polar bears in the southern Beaufort Sea". What is causing this dramatic decrease? They go on to confirm that: "Polar bears rely on sea ice to access the seals that are their primary source of food as well as to rest and breed". The connections have been clearly shown, yet no-one listens! - that the progression of climatic change and temperature increase is bringing about the melting of the ice caps seems obvious, yet year in year out polar animals are meeting their demise due to these recent changes.

You may ask: Why are Polar bears so badly hit? Well, in the Antarctic, polar bears are at the top of the food chain, and their main food source are seals. If polar bears are no longer able to hunt seals in the same quantity, then their population may increase. Yet sudden loss of ice is not the only problem in the survival of the polar bears. Seals, whose population would increase as an effect of the decrease in polar bear population, is not taking place. The fact is that seals' main food source - which are krill - is also declining in population due to the rising seawater temperatures.

The Foreign and Commonwealth Office ⁵ - regarding the impact of several factors on climate change - states that temperatures in the "Antarctic Peninsula have increased over 1°C since 1955", and that, "Climate in the

Antarctic Peninsula has warmed by 3°C. Furthermore, in that article, I also found that "krill numbers have dropped by about 80% since the 1970s". The krill, together with seals and polar bears, are all losing their environment as krill are also dependent on ice from which they feed. The decline of all the species which are supporting the commonwealth of polar bears means that bears, as one of the first in the ladder, will lose food availability when in fact they need more food for fat storage and survival. In the long term, my reflective coat may become 'desertified', and nothing like it is during the life that I have known so far.

Oh Sun, oh Sun, is there still a chance for us to save, not only my people but the varied and wondrous populations of incredible creatures on your dear planet?

Or has the chance for salvation already slipped away?!

Yours ever more worriedly yet sincerely,

Planet Earth

[Letter #3]

Exp: The Sun

Fao: The World

Re: Climate Change

05-06-2022 A.C.E.

Dear Sun,

Yet again, I must reach out to you and tell you of what is happening!

Climate change caused by greenhouse emissions - as a result of human activities here - has not only decreased my biodiversity and ice caps, but also affects my climate across the globe. My dry seasons have become longer and hotter. As dry seasons increase, my vegetation dies from the lack of water. Wild bush fires have indeed increased significantly in the past years. 'Future Earth'⁶ (2020) states that Australia by itself has experienced an increased rate of bushfires of up to 40%. In that article, I have also read that there are two main drivers to the issue: "climate change-driven changes in extremes" and "widespread land use change". As I am looking at Australian bush fires synchronously, I read that the Australian Department of Agriculture estimates that 50% of Australia's land-mass has been designated for

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agricultural use with "44.87% graze animal" cultivation, which is caused by highly arid climate and clay-based soils which are highly intolerant to drip-irrigated cultivation. Under the conditions of high fertiliser usage, clay-based soils like vertisols and luvisols result in type 2 high salt concentration, which subsequently blocks water from all shallow rooted plants⁷. Secondary salinity is not only caused by irrigation itself but by the "land-use change", and according to Global Forest Watch⁸: "From 2001 to 2020, Australia lost 58 ha of humid primary forest", which is a base to the biological balance to the ecosystem. The deforestation of land which is then most commonly used for agriculture - is demolished.

As the Department of Primary Industries and Regional Development there states: "Native vegetation has evolved deep roots and tolerance to the highly variable climate" and "most agricultural plants are short-season annuals that generally have shallow root systems and do not use all of the rainfall". This leads to water accumulation in the groundwater here, raising the water table and mobilising salts to the soil's surface.

At the same time, the increasing temperatures mentioned earlier, accelerate evaporation processes thus causing salts to settle on the top surface, draining the soils and blocking water from shallow crop roots.

Today it is estimated that "1 Billion hectares" of my skin is affected by a saline white rash - and I can't do anything to stop this! It is true that when my temperature eases, and my water flow returns to normal, it gets significantly better... but this is a repetitive cycle that increases together with rising temperature! The population does not yet seem to understand that my rising

temperature will accelerate the evaporation of water on my body surface, and that fertilisers are polluting my body!

The very moment I get a bit closer to you, Sun, the problems return and increase. But it's not that you are the problem, not at all, it is me, or my people who are the culprits of all this! I allowed them too much, I was letting them do what they wanted without looking at the consequences - but the truth is, anything they do will someday reflect on my health. And now I realise that it may be too late! - and humans are arguing about whether anything is happening at all!

Now I am struggling to catch my breath; every inhalation is a pain, tree-growth is falling, being replaced with monoculture crops, my species are losing their homes, decreasing their numbers day after day, which may lead to their ultimate extinction! Calling for action, I hear Jeff Tellefson⁹ talking about the importance of biodiversity and that nature should be at the top of human hierarchy ladders - how right he is! Denise Chow¹⁰ also, shares the sad news that: "Since the 16th century, humans have driven at least 680 vertebrate species to extinction". At the same time, she publishes predictions of a further "1 million extinctions" !

Reading elsewhere, Robert Watson¹⁰, lecturer in Environmental sciences at the University of East Anglia, states that: "We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide". Am I losing everything I have been working so hard for, during so many eras and cycles of life? Sometimes, oh Sun, I pray that this is just a nightmare from which I will suddenly wake up!

Perhaps it is just an intellectual scam like hordes of my population say,

or some propaganda consistently repeated by politicians so that they can, perhaps, proceed with their yet unknown plans! Yet whatever I think, my health is deteriorating and that seems to say it all! I know how I feel! All the factors seem to correlate with the published data - so why do my human guests not want to believe what the evidence is saying to them? Is there a reason for this? I don't understand!

Please tell me though, please, if you know - can I still save myself, will the people listen in time so as to reverse the tide of disaster that is about to engulf my body if nothing is done?

Or is it impossible to change human actions?

Is that ever possible?

*Yours, with trepidation and fear,
yet still sincerely,*

Planet Earth

Footnotes (1)

1 – Hannah Ritchie, Head of Research at ‘World in Data’, focuses her research on food supply, agriculture, energy, environment and global development, while Max Rose (founder of ‘World in Data’) uses his research methods on humanitarian issues such as poverty, global health and distribution of incomes.

2 – More information on climate change can be found at: <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>

3 – Data on ice cap melting and its effects can be found at: <https://www.nationalgeographic.com/environment/article/big-thaw>

4 – The ‘World Wildlife Fund’ (WWF) is the world's leading conservation organisation. A UK based donation-reliant organisation, it works towards the protection of life and habitats in waters and on land. For more information, visit <https://www.wwf.org.uk/who-we-are>

5 – The ‘Foreign and Commonwealth Office’ is a UK governmental body looking after the concerns of the Commonwealth of Britain internationally, its work being entirely funded by UK government resources. For more information on their activities, visit: <https://www.gov.uk/government/organisations/foreign-commonwealth-office/about>

6 – ‘Future Earth’ – *“Launched in 2015, Future Earth is a 10-year initiative to advance Global Sustainability Science”* – for more information on their mission and objectives, visit: https://www.google.com/search?q=about+future+earth&rlz=1C1CHBD_en_GBGB971GB971&oq=about+future+earth&aqs=chrome..69i57j0i22i30l9.5595j0j15&sourceid=chrome&ie=UTF-8

7 – More information on salinity defects can be found here: ‘Dryland salinity in Western Australia | AU Dept. of Agriculture and Food: <https://www.agric.wa.gov.au/soil-salinity/dryland-salinity-western-australia>
0=: :text=The%20scale%20of%20the%20dryland,least%20%24519%20million%20per%20ve ar.

8 – ‘Global Forest Watch’ was founded in 1997 to provide up-to-date data on deforestation, the protection of global sustainability of forests and to mitigate illegal deforestations.

9 – “1 million species under threat of extinction because of humans” is the worrying

situation shared by the 'Biodiversity Report 2019'. More on the report can be found at:
<https://www.ipbes.net/global-assessment>

10 – Robert Watson is a strategic director at the University of East Anglia, one of the leading environmental scientists internationally. He is former Chair of the *Intergovernmental Panel on Biodiversity Ecosystem Services* (IPBES). Watson's research interests include biodiversity and ecosystem services, agriculture, climate change, and the ozone layer.

Part 2

The Case against Humankind



Central Solar Magistrates Court

Mean	1 AU $\approx 1.496 \times 10^8$ km ^[4]
distance	8 min 19 s at light speed
from Earth	

The Accused: *Human Civilization*

149598023 km (92955902 mi) from the Sun

REF: 510072000 km2

Date:1/1/2020

Information has been forwarded by The Earth, Landlord of your rented property.

It is stated that the accused have been regularly, and for several centuries, severely assaulting the aggrieved physically and mentally as well as stealing goods and damaging leased lands.

The offences have been found to be in contravention to - but not limited to - the following legislation (in the UK alone!):

Domestic Abuse Act 2021

Housing Act 1996

Section 8(1) of the Theft Act 1968

Environmental Impact Assessment Law (PD 1586)

Toxic Substances And Hazardous Waste Management Act (RA 6969)

Clean Air Act Of 1999 (RA 8749)

Ecological Solid Waste Management Act (RA 9003)

Clean Water Act (RA 9275)

The Environmental Protection Act 1990 & 1995 (EPA)

Documentation against you and forwarded to your representatives, is attached to this document for your consideration and immediate response.

You are herewith summoned to appear before *The Central Solar Magistrates Court* at 1 AU $\approx 1.496 \times 10^8$ km^[4]/8 min 19 s at light speed on 1/1/2030 at 00:00, with the requirement that you propose the actions that will be put in place towards Planet Earth's repair and how the physical and mental well-being of its populations will be brought about. It is understood that, at this time, complete recovery will not have been made, therefore it is expected that the representatives of humankind will appear in court with sufficient documentation supporting a proposed plan for the saving of Planet Earth's ecology and environment, fit for human subsistence.

If the above-mentioned requirements are not met within a specific timeline, to be determined at the hearings, then significant sanctions and penalties will be applied. If, by the time of the hearing, The Earth has suffered any further devastation, damage or civil or criminal abuses, then these will also need to be taken into account and additional charges may be levelled accordingly. It is highly possible that if no changes happen and negative behaviours continue to further impact the state and health of Planet Earth, then non-reversible changes will take place degrading the lifestyle of all.

In the latter case, a term of imprisonment may be the only option,

The Sun

Central Solar Magistrates Court



Central Solar Magistrates Court

Mean	1 AU $\approx 1.496 \times 10^8$ km ^[4]
distance	8 min 19 s at light speed
from Earth	

Accused: Human Civilization

149598023 km (92955902 mi)

REF: 510072000 km²

Date:20/1/2020

In support of your recent summons to the Central Solar Magistrates Court, we are now forwarding to you all the evidentiary documentation that has been gathered against you and your civilization. Please analyse all files provided herewith and provide your response to said evidence during the trial.

In this document you will find a number of photographs, evidencing the damage assigned to you, as well as a series of links to video-evidence which has recorded some of the effects caused by your irresponsible actions to date.

The Sun

Central Solar Magistrates Court

Part 3:

AN ENCYCLICAL LETTER

The Words of a Pope

Religions and religious leaders are not the scientists or politicians who are in place to change the mechanisms of ecology. However, Christianity in particular, as one of the oldest social tissues of the ecology of the human mind, has the potential to mediate in matters of importance of our “Sister” Earth. Up until today, Christianity is recorded to have influenced the lives of over 30% Of humanity. It is not anyone else’s moral right to speak for the head of a given faith. Therefore, instead of writing anything on behalf of the Christian religion, I am here presenting some quotes from Catholic¹² Popes who have stood at the top of the hierarchy of planetary religions since the beginning of the modern civilised world.

Pope Francis’s recent ‘Encyclical Letter’ (2015) was a continuation of what John Paul II had begun, and he summarises the input of the Catholic Church on ecology when he speaks to our beloved Earth with these words: *“This sister now cries out to us because of the harm we have inflicted”* and *“We have come to see ourselves as her lords and masters, entitled to plunder her at will”*. Further on in the document, reflecting on words of Pope Benedict XVI, he writes that: *“the deterioration of nature is closely connected to the culture which shapes human coexistence”*.

Pope John Paul II ¹³, one of his predecessors, focused on social and environmental conditions significantly, underlining that little effort had been made to *“Safeguard the moral conditions for an authentic human ecology”* and he wrote that we have *“styrozinised nature”*. John Paul II was the child of war; he had seen and experienced the disasters of war upon the three ecologies of Guittari and observed the damage caused by political actions on the human life

and psyche. Therefore he urged for, and influenced, the changes which came after the collapse of the USSR. He was perhaps the main figure of inspiration and hope to post-war Europe, one whose voice that has helped build today's foundations - for his words proposed the need for dramatic change.

Returning to Pope Francis's Encyclical Letter (2015), it is significant that he speaks about the effects of climate change and its effects on normal people and the poorest civilisations. In that letter we find that it is humanity being placed at the forefront of the global crisis, dividing humanity according to financial means - for it is the richest who have caused the largest problems and the poorest who suffer the most dire consequences. Those who make the biggest profits seem to care the least and it is those who are at the bottom of the economic human hierarchy that will suffer most. The inequality of human coexistence is therefore one of the biggest dilemmas which will determine who will suffer most.

Adding the voice of a passionate thinker, one who was more of a secular man for the ages than a religious figure, it is interesting to see how Jean-Jacques Rousseau¹⁴, whose work 'The Social Contract' (1762) had such a lasting impact on mankind, writes that: *"No state has ever been founded without a religious basis"* and that *"Christianity is the body politic's strongest support"*. It is in fact found that within the formation of a new civil state religion was the base of humanity's moral systems. Christians are found to live according to their rules, in faith that the life on planet earth is temporary and that good living according to religious rules will be rewarded with life after life, one in which there will be no more pain. It is in fact with the simple rules that Christians live and expect to co-exist with all living creatures in harmony, certainly without greed - which will be punished as a sin. Historically, priests

have been responsible for harmony in state matters also and religion has been the guardian of human morality; However, the status of priest, prince or king has made them “*ministers of the Church rather than its masters*”. No matter what your place in the social hierarchy, everyone was part of something greater and lived in line with rules which came outside of human imagination.

Today, other religions and not just Christianity are losing their outreach, often becoming compromised by atheism’s values, loss of meaning without God. Pew Research Centre (2011) states that although Christianity in the southern hemisphere has increased, Europe itself has lost 44.4% of the population who identified themselves as Christians.

Despite religion and its origin, faith has nonetheless always been a source of human morality. The question is, if the rise of atheists continues, will people not lose their sense of moral being and moral place on the planet? It is probably *Faith* that has supported most nations to survive the worst moments of their history successfully. If atheism flourishes, will people begin to form new secular ideologies or will they just form a code of morality to manage the Earth population’s feeling of belonging?

In search of such code for a new age in society, Dale Carnegie, author of ‘How to Win Friends and Influence People’ (1936), provides a manual for people who are lost in society and in search of help to become more human towards other people. However, his manuals are in fact based on religious beliefs and many of his quotes go hand-in-hand with biblical messages, tactfully rearticulated to today's understanding and problems, eliminating the effort of rearticulation which is the case in biblical passages, especially when it comes to modern day issues at work, school or technology which have drastically changed since 4BC.

Footnotes (2)

12 - The Catholic Church is one of the oldest religious organisations on the planet. In line with Catholicism as the main religion of the country, the church was the place of local politics and regions were divided into 'parishes' dependent on the given church. It is also the church where people gathered together for spiritual, political and social integration - it was the church that influenced social actions/behaviours in the community, outlining what was good and bad within the community structure.

13 - John Paul II was one of the major figures of post war Europe ,having a huge impact on the fall of the USSR in 1995. He was an influence on many European countries, giving perspective and hope for a better future at the same time as having a huge impact on social ecologies. His work was also hugely influenced by the environmental conditions, which can be read and heard in many of his recordings.

14 - Jean-Jacques Rousseau was a political philosopher based in Geneva, Switzerland. His work had a huge impact on European Enlightenment and the French Revolution. His work still influences the politics of today, despite time and all the changes that have occurred since. In 'The Social Contract' we find a work which talks about the relationships between social, mental and environmental ecologies, including how environmental conditioning corresponds with the human mind.

Part 4:

Human Testimony

The View of Humans

TOGETHER WITH the documentation gathered here, we, the ordinary human residents of our beloved planet Earth, we turn to the court with testimony regarding the actions that are being undertaken on the surface of this globe. - We want to share some of our experiences. We are a collective of three young humans, people who are trying to begin our professional journeys in our chosen careers; we are from three different geographic locations on Planet Earth, experiencing in reality what for some may be just a theory or maybe a fact but which does not hit the global North at the same scale.

WITNESS no.1

I am Francesco, Justin G. , aged 19. I live in the Philippines.

I am a proud native resident of Philippines. It is true that in the past years climate change had an immense effect on our planet. I remember the time in school where “teachers always told us to take care of our environment”, “We plant trees, vegetables, seeds” today “They do so much things that can destroy our planet”, They are “Cutting trees, flattening mountains, burning fossil fuels, rubbers” In the past years we have experienced “difficulty in water supplies, drying up of dams especially Angat dam” Angat dam is the biggest dam in Philippines

which is responsible for our water supply. The drying out of the dam leaves many of our people without water. We used to have many beautiful forests and beaches, but they are all disappearing.

Year by year we are experiencing warmer and warmer summers “not like 10-15 years ago” because of that we are often no longer able to function during the day and we need “electric fans” to keep cooler.

During the rainy season we experience “Typhoons but it’s stronger, the winds can lift the roofs of our houses and can knock out trees” Together with the disappearance of our native forests we experience far more intense weather, putting our lives at stake every year.

WITNESS no.2

*Anonymous witness Age 25 and I live in the Emirate state of Oman *

I find that Oman seems to experience "more frequent cyclones than before. It used to have one every decade or two , now it is almost yearly. The heat is rising as well. It feels like there is no winter anymore" When you look at satellite imagery you will find some development of farms which try to fertilise the Oman deserts but how much good can these developments bring if the ground waters are used up for agricultural purposes leaving us without water access?

WITNESS no.3

My name is Irena, aged 47,

I come from what used to be a small village in the outskirts of Kalisz, a town in central Poland.

I remember my childhood well as it was the best time of my life. When I was a child my village was full of fruit trees "all nearby alleys were planted with fruit trees which often belonged to the council" and "we often could rent them," care for them and sell their fruits from which we had extra income "towards our school needs". There used to be a lot of "meadows, flowers and insects and birds".

Which I really miss today. The trees were also often a place where "children and adults could meet and socialise together" which was something we all enjoyed.

We used to have warm summers but also really cold winters where "-20oC was a normal thing, back then we used to have between 50-70cm of snow," but today the winters we used to know are gone.

Farmers back then didn't use "pesticides and fertilisers like today" as they mainly used "natural methods" to feed their crops.

When I was in my early 20s "the climate got warmer" and we didn't have the winters we used to have. Thunders and floods were a lot more common. At the same time the plants I remember from childhood "begun to disappear under new developments" which covered a lot of the ground with concrete - blocking the rainfall from soaking into the ground.

Today the village I used to know is not the same place. The air became really polluted with smog, there is no greenery in which we used to play.

Today I am not sure if we should call this a village or perhaps a further away district of Kalisz. The trees are gone; there are no trees visible for kilometres. Children no longer have a place to roam around as all the fields designated for intensive production are built up to every cm of ground. There is no more socialising like it used to be. All neighbours are distant and no one knows each other.



<https://www.youtube.com/watch?v=GwluakE0p8o>



<https://www.bbc.co.uk/news/av/science-environment-42031999>



<https://www.theguardian.com/environment/2021/aug/20/brazil-amazon-deforestation-report-bolsonaro-climate>



<https://www.foodsecurity.ac.uk/challenge/>

TOO LITTLE, TOO LATE ?

An APOLOGY from Humankind

EXP: Humanity

FAQ: The Central Solar Magistrates Court

In response to the summons received from the court, we would like to forward our apologies to the Earth. It is perhaps that the documentation received may have been notified by some of our civilians. However, we do not find all these situations to be purely caused by our actions. This is due to the fact that Earth has consecutively and on a regular basis going through a series of climatic changes. It is true that Earth-like never before has examined intense population growth, which is perhaps responsible for the intensification of production. As governmental bodies, we tried to give our people the best possible living to sustain their welfare and health, but this was purely for the better good of all.

We will look into this issue in more depth and will attempt to respond adequately to the research and data you have provided in the evidence bundle.

With Kind Regards,

Climate, Humanity & Survival: An Exploration

Humanity.

EXP: Humanity's Legal Representative

FAQ: The Central Solar Magistrates Court

Your Honour,

I am writing regarding the recent summons to the court. Your Honour we as a collective are fully aware of the health state of our dear Earth. Our ancestors for decades mistreated our beloved Earth. She herself for long has been trying to suffer in silence not showing her state of being... But we knew, we all knew that this was happening. Since 1800 and the beginning of the Industrial Revolution there has been a huge concern over the side effects which we may face by not healing the wounds we consciously have been making on Earth's bodies.

Svante Arrhenius (1896)¹⁵, at the time one of the founders of physical chemistry, highlighted his concerns over the negative consequences of increasing carbon dioxide in the atmosphere as he stated that "fossil fuel combustion may eventually result in enhanced global warming". Although he was correct in terms of the consequences his time prediction turned out to be overly optimistic since global warming did not begin 3,000 years later but in

proximity of 70 years. where in the 1970s his work began to gain value and real physical meaning. It is to be said Your Honour, although back in time global warming was a theoretical speculation in the 1970s we began seeing the first consequences and in an ignorant manner we have continued our extractivist procedures and real environmental changes appear at extraordinarily low speed. Is this because we still don't believe in climate change? Is it because we simply find it difficult to change our habits?

Laura Parker ¹⁶ in The National Geographic (2019) Published a document on plastic pollution bringing to the table one of the biggest pollutants on earth, She has shown the vast damage which plastic has brought. Plastic, first invented in 1907 by Leo Baekeland ¹⁷, escalating in popularity in the 1960s has polluted lands, rivers within only 60 years of existence.

Originally Synthetic Polymers were a solution to protect trees. Before the emergence of plastic we were fully dependent on natural resources like paper or glass. Paper was flexible, it didn't last long. Glass was easy to break. Plastic was a new material that had the flexibility and durability, suddenly within the change of political structures, under capitalist pyramid we have lost the sense of plastic reuse as it was cheaper to extract new than reuse what was made before plastic flooded our way of living we were capable to reuse newspaper as packaging, reuse glass bottles. However plastic once made ended up in the bin. Client Earth states that plastic co2

emissions are responsible for 2.8 gigatons of Co₂/year by 2050

Client earth estimates that plastic Co₂ emissions will escalate up to "56 gigatons" which would be responsible for up to "10-13%" of the global emissions. Your Honour, we do not understand how something potentially good could have turned out to be a global catastrophe. Why did our governments allow this to happen?

Despite the introduction of plastic we are still cutting down tropical forests at a mass scale. Together with the communist approach in the past we were producing objects, materials which could be easily fixed, today together with the growing capitalist economy and hunger for profit companies purposefully manufacture goods which are designed to break and be unaffordable or perhaps even impossible to fix. We as clients are then forced to buy new products feeding the economic pyramid.

The governmental bodies continuously emphasise their urge for our better future - but how much of this is their good faith and how much a growing business and profit?

Legal Representative for Humanity



The Central Solar Magistrates Court

Mean distance

from Earth 1 AU \approx 1.496 \times 10⁸ km[4]

8 min 19 s at light speed

The Accused: Human Civilization

149598023 km (92955902 mi)

REF: 510072000 km²

Date:20/1/2020

For the Attention of: Humanity

In line with the latest witness statements, Humankind will be now under strict control measures. Moreover, We expect Humanity to prepare documentation outlining their views on what, in their opinion, has caused the issues we see everywhere today. It is also expected that you and your representatives will prepare documentation regarding the excessive use of plastics, proliferation of waste and their deleterious effects on the environment.

All documentation needs to be received two weeks before the date of trial, which will be provided in a forthcoming summons.

The Sun

Central Solar Magistrates Court

Footnotes (3)

15 - Savante Arrhenius was a Swedish physicist and chemist. Founder of chemical physics. He was one of the first to state the possible down effects of mass coal burning for industrial purposes.

16 - Laura Parker writer at the National Geographic her work embodies research on environmental conditions impacting the ecology of human mind and influencing physical action on a global scale.

17 - Leo Baekeland Belgian was an American chemist. His invention of plastic was inspired by the possibilities plastic may bring such as moulding. It is worth stating that the invention of plastic isn't a problem in itself but the way we have decided to use it.

Part 5

Industrial Revolutions

Industrial Revolutions, not One but Many

Since the industrial revolution in the 1800s, our Political structures have focused on promoting better life for all, aiming at the relationship between social and political ecologies. Queen Victoria in the United Kingdom was one of the first in the world to transform the livelihood of their people by transforming the social ecologies and production from handcrafted goods to mass production, which in long term has given better living to all despite the beginning struggles where children as young as four years of age were a work force in many industries . What, on the one hand, increased extractivism of nature, on the other hand, allowed lower prices and affordability for the working class. The industrialisation of production brought birth to the capitalist structures we live in today.

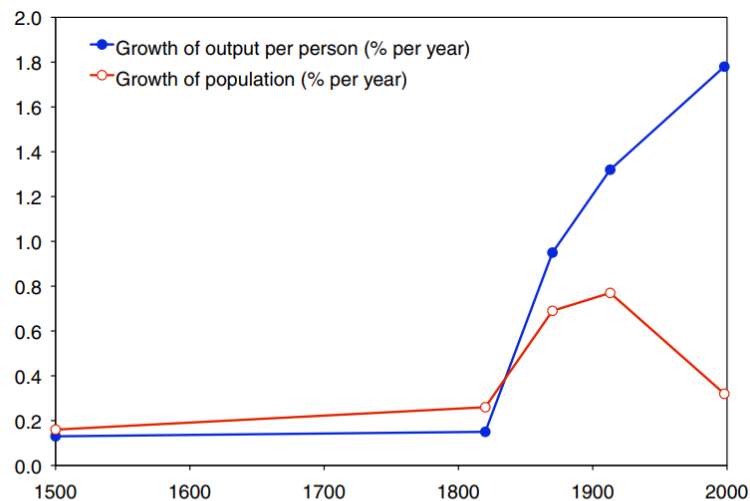
Adam Smith ¹⁸, author of 'The Theory of Moral Sentiments' (1790) was a father of today's economy. Already, back in his day, he was knowledgeable of the catastrophic phenomena that increase in extraction may bring. Smith questioned our morality and sensitivity to one another and the fact that we treat Earth as a form of standard and guarantee. Earth is the mother of each one of us, and although we do not know how she feels Smith in this text brings human feeling and behaviours to analyse capitalist policies towards the environment. In the document, Smith has deeply emphasised our selfishness and urge for better living "*The natural preference which every man has for his own happiness above that of others*". Smith does find that within a growing economy, we as human beings will urge for more. Along with this statement, we find that people perhaps need to find happiness, a state in which they have

equal rights to access what brings joy to their minds. Should Humanity simply receive what they want? Is the satisfaction of all possible?

Smith noted that, "*Though Nature, therefore, exhorts mankind to acts of beneficence, by the pleasing consciousness of deserved reward, she has not thought it necessary to guard and enforce its practice by the terrors of merited punishment in case it should be neglected*". Would a behavioural approach of Earth towards our actions, rewarding good and punishing bad behaviours, help us understand the importance of our planet's health?

During the Industrial Revolution not only Adam Smith was thoughtful of the Earth's ontologies. Together with Adam Smith we had personalities like Henry David Thoreau, Friedrich Engels, Thomas Malthus, the Luddites, John Stuart Mill, John Muir and William Wordsworth. Despite the beginning of a theoretically better future all were aware of what industrial revolution might mean for the current and the future.

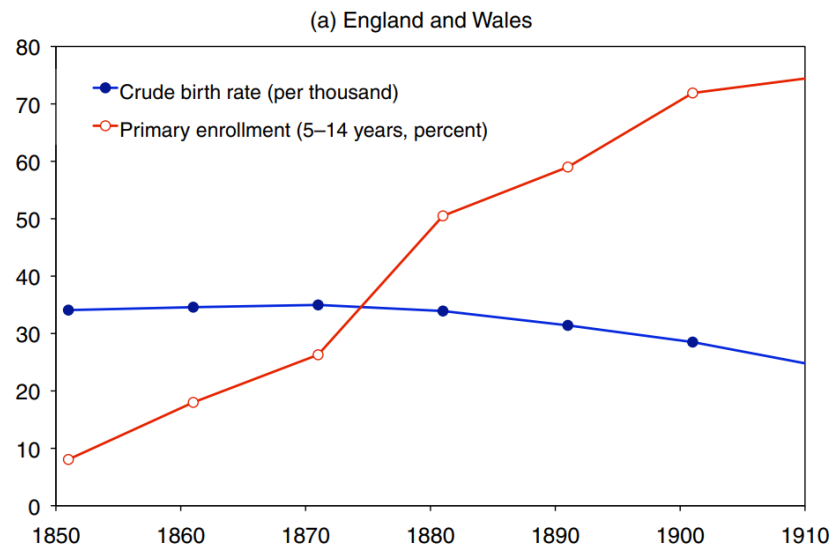
One of the major protests in the United Kingdom was the movement of Luddites . O'Rourke et al. (2011) Reviews the history of Luddites analysing the industrial and demographic changes which pushed workers at the time to protest against the mechanisation of industries. Here we find graphs visualising the relationship between the rise of GDP and rise in population.



Source: Galor (2005), based on Maddison (2001).

The graph above shows that, together with population growth in the 1800s, the standard of living began to significantly outstand a degrading living standard and not until the spike of mechanisation that the output per person began to rise together with population growth.

Before the industrial revolution, most works were accomplished by human individuals who often had to show great knowledge and skill in order to produce a given object. Rise in machinery at a rather fast pace was eliminating handcraft, accelerating production efficiency and decreasing production time. At the same time this change has meant that the workforce no longer had to be highly qualified and even children as young as 4 were employed to work in the highly hazardous conditions (*qv.* graph on next page).



Together with the accelerating changes many craftsmen who were working towards the mastery of craft for years were left unemployed. Stress caused by the demographic; political, social changes caused increasing pressure leading people to mass protests across the country where the luddites gathered causing riots and burning machinery as protest against the new developments which left them without jobs and sufficient source of income. These events showed that environmental conditioning can have a huge impact on human behaviour.

Within the moment where middle class families on a large scale are deprived from their so called stable living style the environmental stress may cause unpredictable effects which from a human perspective can also be fully understood. In fact this situation has shown that no change can be made at a drastic pace and every move should be well thought out in order to sustain a smooth transition and living style.

It is a fact that through time everyone benefited from the development in one way or another under social and political context. The industrial revolution supported two of the three ecologies by Guttari including the mind

and social since we in the Global North in vast majority no longer have to worry about food or being warm in winter months where todays mean unemployment rate in the European countries according to 'Eurostat' (2022), balances at around 6.8% which is seen as one of the best results since last crisis in 2012.

The Victorian revolution was just a beginning of the transformation of social ecologies as starting from the 1950s the society has experienced further developments of living standards.

The 'Anthropocene Epoch'

George Perkins Marsh¹⁹ was the author of 'Human and Nature' (1864) This is one of the first books which explored the terraformation and relationship between nature and the human kind. Marsh has clearly explored the greed of man on nature in the heart of the first industrialisation expanding on the geologic changes damage of perhaps an Eden state will bring in the near future. In the text, the author states that "*a matter of first importance*" in the process of adjusting the terraform to the civil needs not to "*derange and destroy what in too many cases is beyond the power of man to rectify or restore*".

Yet the 'Epoch of the Anthropocene' is in simplest terms the era of greatest human input into the natural ontologies. 1950 is seen as the beginning of Anthropocene as we begin to create chemical fertilisers²⁰ soils of cultivation never seen before. Starting from the first chemical fertilisers in 1900 up to mass use in 1980-1990s we were unconsciously freely applying chemicals into the soils replacing organic matter with often white powder thinking that this will do a better job.

Along with the introduction of chemical fertilisers, plastic is yet another human-made hazard which massively increased in exploitation during the 1950s, to the point that today we do not see life *without the use of plastics any more!* What was plastic's focal intention of use, originally?

Roland Geyer *et al.* (2017) state that the majority of plastic produced is used in packaging. The increase in plastic packaging has resulted in a steady increase of solid plastic waste from 1% to more than 10% of which the

majority is produced in developed countries of the Global North. Monomers are produced from “ethylene and propylene” Which are derived from fossil hydrocarbons making them non-degradable which result in their stocking in the landfills rather than decomposition. The exact journey of plastic is not known. We make the product, bin it; however, after this point we cannot be sure of its journey- One thing we found is that oceans are now contaminated with plastic debris. Zooming into 135°W to 155°W and 35°N to 42°N.

We can find a huge plastic garbage patch which is just one of many. This has shown how far we have fallen from what we as civilisation have been warned about by Marsh. We have started to use nature to maximise our comfort by producing light-weight portable plastic, over which we lost control. In that same article released by Roland Greyer(2017) we find that majority of plastics produced are not being reused which at the same time indicates the continuous line of sourcing new material for plastic production which automatically interlinks with further nature’s destruction (qv. graph below)

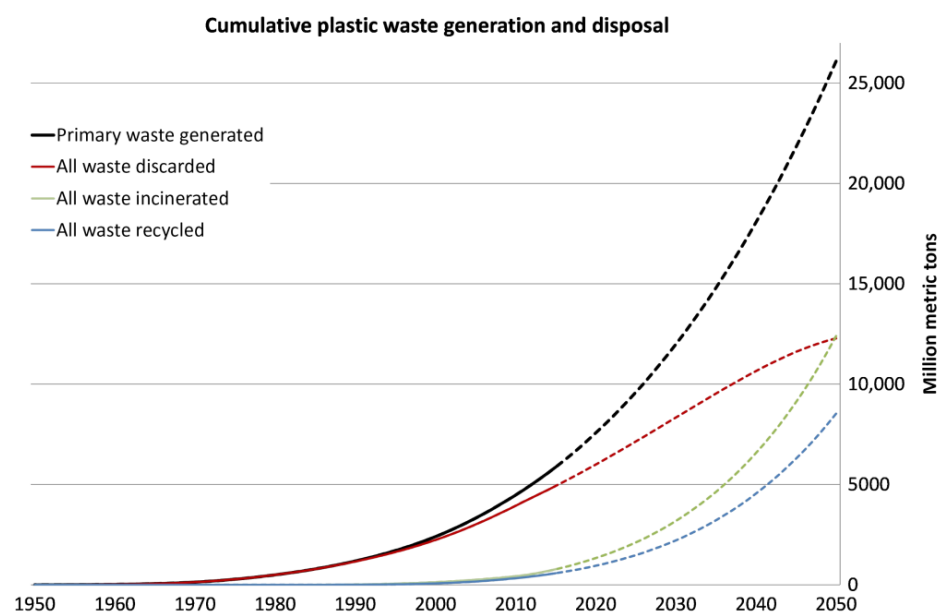


Fig. 3. Cumulative plastic waste generation and disposal (in million metric tons). Solid lines show historical data from 1950 to 2015; dashed lines show projections of historical trends to 2050.

The graph above clearly indicates that not only we already produce more than we recycle but it also indicates that in fact we do not know what is happening with a fair quantity of our produce. Reality is that if we produce more than we reclaim for further disposal or recycling the plastic most likely disappears into the environment which we as humans are ignorant of and often do not see.

Alejandra Borunda (2019) "*This young whale died with 88 pounds of plastic in its stomach*". This article is one of many in the recent media. It is found that death of animals is no longer the case of natural processes, but an effect of human unconscious actions where plastic we leave travels through air and water ending up in the land of indigenous mammals. These indigenous mammals on the other hand not knowing what the objects are often find them as an edible object with which (like in the case of the young whale) they starve themselves to death.

The Automative Era

After the transformations made in the 1950s-1970s there were yet more developments towards 'production automation' in Europe, where everything was meant to happen within the press of the green button, yet again accelerating the speed of product but also taking little into consideration the safety of workers.

The first step in the automation of work is said to be the Ford Company, which brought the term of "automation" into true being. Ford established the first Automated department in 1947 but it was not until the 1970 where automation in the production line became a widespread methodology. After Ford's invention the automation of production controlled fully by button pressing rose in interest. However, once again similarly to the Victorian industrialisation era this meant acceleration in produce and greater hunger for material sourcing. By 1970 automation was met in many industries including construction where the concrete blocks began to speed up the infrastructural construction since many elements could be brought to the building site readymade and be simply mounted together.

The movement of produce automation in connection to Victorian industrialisation also had sceptics who disagreed with the ideas. One of the well-known luddite's of the 1970s was Theodor Jon Kaczynski²¹ who was prosecuted for bombing acts which as he explained were a manifesto against the automation of industries. Madness, stupidity or intelligence? Despite his act on innocent people on whom Ted Kaczynski or known as Unamomber has played his act. It is found that his action should certainly not be ignored since

perhaps his actions are a case of quantity as in this case we have seen one person showing disagreement in that form. But what if those incidents happened on a similar scale like with the luddites in the 1800s? - Perhaps then his actions would not be seen as a form of madness but merely as an act of protest?

Closing Words - Humanity in the Balance?

It is now more than ever before that our planet earth is speaking to us. We can be ignorant and continue living like we are eliminating every meter of forests without any thought of sustaining our future, or we can invite earth into our table and work with her hand in hand.

The choice belongs to us!

History shows that we been knowledgeable of all the consequences that the Teraformation of land and redesign of the planet according to our needs will risk the epistemologies and ontologies of our only planet.

Tabula Rasa - It is time to clear our minds and perhaps resume to the past where we were not dividing into human and non-human categories of existential rights but perhaps start giving us, the flora and fauna, the nature, the planet the equal rights. Jean-Jacques Rousseau identifies that Christianity in its form from the past would in fact create the “ideal” society. It is simply due to the fact that the biblical Christians followed rules which shaped their morality. Within the moment when we start treating Earth as our close relative all of the ten commandments of what forms Christian religion do start to bring meaning also on the planetary level, this is without diving too much into the bible which would make this piece of work a Christian invoice of ecology. No matter of our background from which we come from, we should build our morality from a young age treating your relatives in the same way as if you would want to be treated.

Vice president Al Gore²² In 1976 had set the first congress hearing on climate change. 1989 The Washington post editorial by Al Gore, where he stated “*Humankind has suddenly entered into a brand new relationship with the planet Earth*”, outlining that: “The world's forests are being destroyed; an enormous hole is opening in the ozone layer. Living species are dying”.

Al Gore during his vice-presidency in the 1990s, is said to be one of the most environmentally concerned politicians and since early 2000s Al Gore is publically noted as the advocate of Planet Earth. Since that time, he has been physically active in all major environmental events and organises public events presenting hard data gathered from across the globe stating the urgency of climate health.

Following Al Gore, activism to aid climate change included the ‘Kyoto Agreement, Japan’ (1997), which was one of the first global political actions to aid the climate change, following scientists having shown scientific data confirming the connection between the rise of greenhouse gases, the rise of temperature and melting of ice caps urging 41 individual countries, as well as the European Union to reduce emissions of gases such as: “*carbon dioxide, methane, sulfur hexafluoride, HFCs, PFCs, and nitrous oxide*” which all are said to be partly responsible for the climate change. The Kyoto Agreement was the first such event which pushed environmental awareness on a global scale and aided countries to make united global efforts. However, at the time the Kyoto agreement did not include developing countries such as China which as we know is among the biggest emitters of greenhouse gases.

The Paris Agreement (2015) is yet again another example of such activism on global scale which has focused on stopping the global average temperature from rising with a focal point not to allow rise to peak above 2 °c

the pre industrial temperature. In contrast to the Kyoto agreement this has meant to include all countries despite their level of development prompting all towards investment in renewable energy.

The 'Green New Deal' (2006) initiated by the Green New Deal Task Force to combat with the struggle of clean air and to divert into 100% renewable energy by 2030, has united countries once again in the struggle of climate change but this time looking at the crisis under the three ecologies including not only the climate change but also people and their lives and taking into consideration the human mind ecologies. It is where the industrial diversion into green energy meant to go in line with market needs to sustain a balanced economy.

Despite the wide acknowledgement of the climate crisis where once again our human eye had to experience what we already knew in theory since the 1800s. We still seem to move extremely slowly in the changes which need to happen as if it is in fact our be or not to be on this planet. Looking back at the financial status of individuals where more money equals greater possibilities, climate change certainly has the ability to convert this diversion since this time those with greater means will have more which they can lose.

This document has evidenced that power of change is in the hands of morality, inclusivity, equality and the ordinary people who as individuals may seem as an unstable mentally individual but in a group becomes a demographic protest whose opinions are taken into consideration. Our individual voice may not mean much when presented in singular form but

when embodied by several individuals backing up one-another the singular voice gains in approbation within the majority.

A 'Tabula Rasa' for a new beginning to our relationship with nature, needs to learn from the past. We need to include the planet to our dinner table and work hand in hand with the planet accepting her epistemologies we may not fully understand making a balance between human and non-human needs in the planetary system.

As Al Gore states in the COP26 interview: *"we do have the tools available to us to solve this crisis, the missing out element has been the sufficient political will"*. Yet Politics, as we learn from history, can be altered by public pressure or simply through change of the political bodies if necessary. It might be difficult for a single person to stand up for their beliefs, but once you get out of your shell of isolation, you may find that in fact you are not alone in the fight.

Change is possible and I believe that all this change needs is *You* !

Footnotes (3)

18 - Adam Smith was a pioneering figure of the Scottish Enlightenment and a political philosopher known as the founder of some of today's key economic theories.

19 - George Perkins Marsh was by many seen as the first environmentalist, looking at humans' relationship with nature.

20 - The first Nitrogen fertilizers were invented by German chemist Fritz Haber in 1909.

21 - Theodor Jon Kaczynski was the author of 'Industrial Society and its Future' (1995). Media have highlighted Ted Kaczynski as a murderer due to the 'Unabomber' campaign that he wreaked, killing many innocent people.

22 - Al Gore, Vice-President of America, was hugely influenced by the global environmental crisis. His travels across the globe and presentations influence people of today, aiding the environment.

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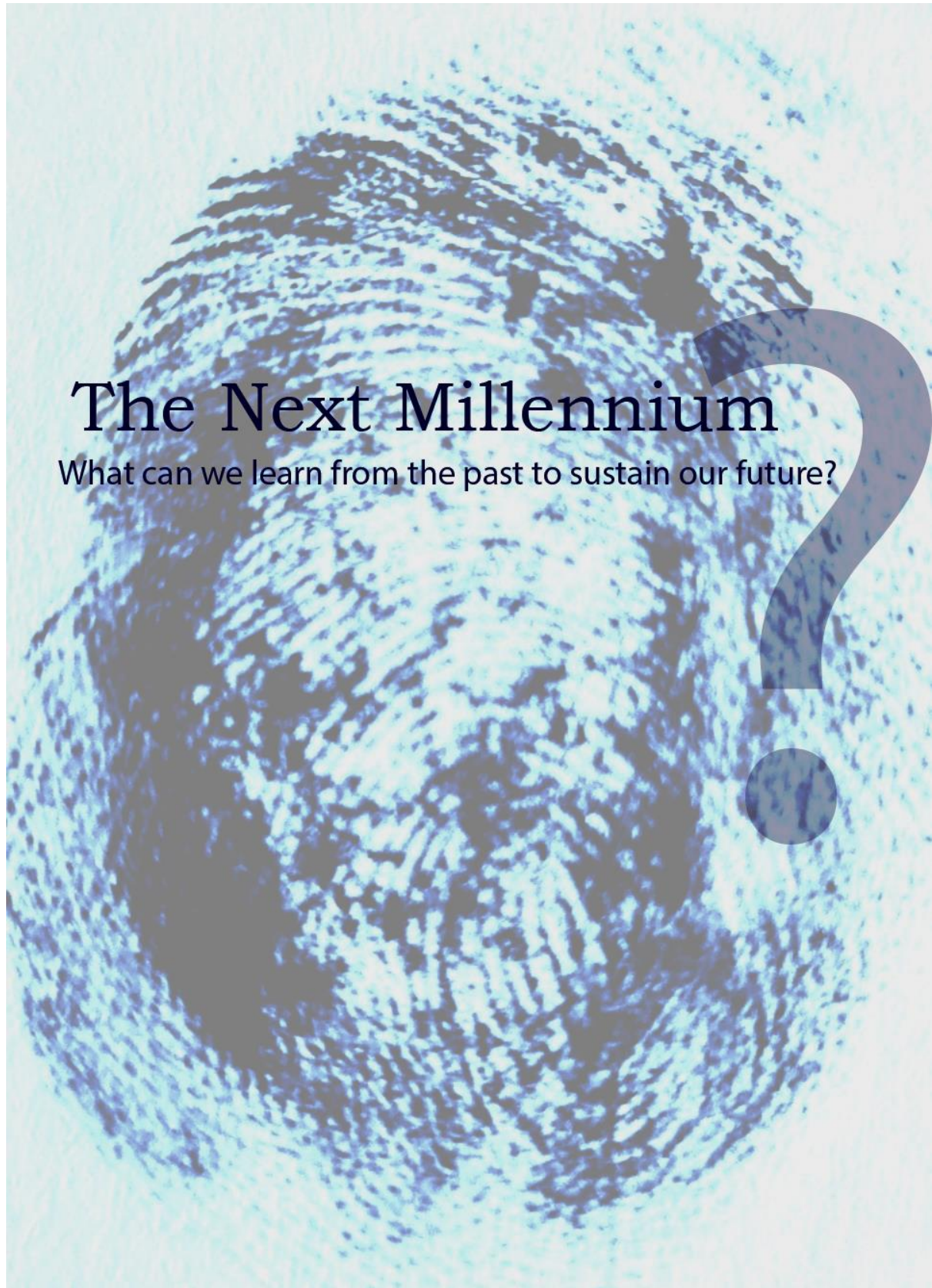
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*The most profound and serious indication
of the moral implications underlying the
ecological problem is the lack of respect
for life evident in many of the patterns
of environmental pollution.*

Pope John Paul II



The Next Millennium

What can we learn from the past to sustain our future?