

Notes on  
The Uninhabitable Earth: Life after Warming  
Book Author: David Wallace-Wells  
Notes Author: William Gasarch

## 1 Websites of Interest

Website of Feedback loops:

<https://earthhow.com/climate-feedback-loops/>

John Oliver Segment on Carbon Offsets being bullshit:

<https://www.youtube.com/watch?v=6p8zAbFKpW0>

10 things that Will Help Reduce Carbon

<https://www.mq.edu.au/bighistory/threshold-nine/issue-eleven/100-ways-to-revers>

(Most of these things would NOT be that hard to do, would NOT damage the economy. This is actually bad news since we are STILL not doing them.)

Reduction our Anxiety About Climate Change. This is really pathetic— gee we can't actually solve CC so we had to tell people how to stop worrying about it.

<https://www.vox.com/even-better/23778284/tips-cope-climate-anxiety>

Most accounts of CC, including this book, don't look at the vegetation vs meat-eaters issue. Here is an article NOT about that issue but about WHY its not covered more. Again pathetic- Gee, we can't get the press to talk about the meat issue, but at least we can report on the press not talking about the meat issue.

[www.vox.com/future-perfect/23778399/media-ignores-climate-change-beef-meat-dai](http://www.vox.com/future-perfect/23778399/media-ignores-climate-change-beef-meat-dai)

Biden Supporting Nuclear Energy I am waiting to see Republicans oppose it since (a) it is used to fight CC which does not exist, and (b) Biden is for it.

<https://www.energy.gov/articles/biden-harris-administration-announces-major->

## 2 Summary

For now ignore the debate about if CC is true or man-made or whatnot.

The book is about what is happening NOW to the environment, and its really bad. He ascribes it to CC (which I do believe) but putting that aside we are in real trouble NOW. Not our children, not the poor, not only people on Island nations, not just *the other* but US.

I found this very pessimistic since it seems like we are doomed. The book is mostly pessimistic with the occasional optimistic aside. Very occasionally and not at all convincing.

### 3 Cascades

Myths about climate change

1. It isn't happening.
2. It is happening but not being caused by humans.
3. It is happening but slowly, so we have time to figure it out (or we don't have to care about it since it won't affect us). NOTE: As someone without kids and who is not close to his nephews and nieces, I might be tempted to think this. For someone with kids they like, this is more problematic.
4. Its only about coastlines so we can all move inwards. Even if this is true, Island Nations will be in trouble.
5. Our wealth is a shield against its damages (that may be true for now but not for long).
6. Burning fossil fuels is the price we pay for economic growth. This isn't quite false, but whats false is to think this is the ONLY way to get Economic growth.
7. Technology will bail us out (Mike and Gail seem to think this. I would be more confident of this one if it wasn't for climate skeptics blocking funding for such research.)
8. Technology will allow us to mitigate the effects of Climate Change.

He argues for all of these points being false. The one that is easiest to argue is that Climate Change is a problem NOW. He blames many of the current wars on climate change, and later shows that

*climate change CAUSES a lack of water which CAUSES wars.*

SO his arguments about whats ALREADY HAPPENING being BAD and CAUSED by climate change I find compelling. I tend to believe the rest as well, though his arguments don't add much to what I already think I know.

One caveat: Some of his predictions are based on population going up and thus having more people using resources. But *The Economist* and other sources say that population is, for the first time in history, going down.

Second caveat: Thinks will get really bad and people will die- so will that mean people use less resources and thus the problem gets better? I doubt it. And there are FAR MORE death-spirals.

Political Problem: We are normalizing insane weather. We now refer to tornadoes as *bad weather* (Page 9)

Political Problem: The Kyoto treaty and the Paris Accords accomplished nothing. The targets were all voluntary and nobody even came close. Or even tried.

Terms like *a 1-in-500 years hurricane* are not a mockery as they happen every year.

The climate models might be wrong but likely in the direction of being to conservative.

### **Feedback Loop:**

#### **Heat CAUSES air conditioning CAUSES more heat.**

Debating if a hurricane is caused by Climate Change: Some of it is, but its not worth figuring out for a particular hurricane if it is, or how much it is. ITS ALREADY A PROBLEM.

Page 34- The author is *optimistic*. I can't imagine how! His reasons are pathetic- technology might bail us out (Carbon-Capture, which later in the book he says is a sham) and that +3 degrees is better than +6 degrees.

Half of fossil fuels emissions are from *inefficiencies*. I find this very pessimist- if we can't even do the easy things that would harm nobody and might even save money for the companies, how can we possibly hope to do the hard things? Indeed- I can imagine the MAGA crowd INTENTIONALLY not fixing those inefficiencies as a form of virtue signaling.

This chapter was somewhat incoherent as it bounded from one topic to the next. The rest of the book has more focused chapters.

## 4 Heat Death

Since 1980 there have had a 50-fold increase in heat waves. The heat waves were devastating.

Models show its going to get worse.

*Three-quarters of a century since global warming was first recognized we have made no meaningful adjustment to our production or consumption of energy to account for it and protect ourselves (page 48).*

This is not quite fair. For the first X years we didn't quite know how bad it would be. However, there is NO EXCUSE now, especially since the longer we wait the harder it will be. It may already be impossible.

There are two approaches to sucking carbon out of the air (carbon capture): We do it with technology or we somehow get plants to do it. Both are hopeless (page 50).

Cities, which is where most people are going to live in the future, are making it worse- concrete and asphalt.

### Feedback Loop

**Feedback Loop: CC makes farms try up which make people move the city which makes cities expand which causes more CC.**

## 5 Hunger

CC is bad for crops and in the past (and now) farmers have been too slow to change to crops that can do well— some of the slowness is technology. Some might be sociological.

Norman Borlaug (1914-2009) is the father of the green revolution which led to much better crop yields. The book claims that ALL of the advances in better crops are due to him. That seems over the top, but clearly he was important and a founder. Diff opinions:

1. Technology helped us before, it can help us again.
2. We are reaching the limits of how much the green rev can help.
3. Norman B was a one-of-a-kind person and we won't see his type again. I doubt that.

4. Future advances will be hard for both science reasons (the low hanging fruit is picked) and admin reasons (scientists spend more time writing grants then doing research).

China and India have modernized by using technology (e.g., fossil fuels) KNOWING that they are harmful. I wonder about that- don't we NOW have better green tech like nuclear and solar?

The book assume here and elsewhere that population will go up. Trends say no- but even so, will they go down fast enough.

Food production counts for 1/3 of emissions. More Veg less Meat would help cut that. Not gonna happen.

(Page 63) Carbon Dioxide has made plants less nutritious.

GEE- just as the book club book *The China Study* made me (bill) a vegetarian, I wonder if *The Uninhabitable Earth* will make me go back to meat? If so, it won't be for long as CC will kill us all. Since 1950 the amount of good stuff in plants has declined by 1/3. (Work done by Irakli Loladze.)

## 6 Drowning

That CC will cause an increase in sea level (at least 4 feet, probably more) has been oddly comforting- OKAY, if thats ALL that CC will do, we can just move away from the coasts, or reinforce the coasts have more levies, this is manageable. The cause of the rising sea level is the melting of the Antarctic and other ice.

Why is rising sea level a big deal?

1. CC will do many bad things, rising sea levels is only one of them.
2. Rising sea levels are bad in their own right. Much of the internet structure is close to the coasts. And moving and-or preparing for the rise in sea level is very hard, probably impossible, especially for the poor. But ALSO FOR THE RICH, so don't get complacent!
3. Ports gone- so more infrastructure problems.
4. Farmland gone.
5. Entire Islands underwater. The people on them can't *move inward*. (If this also threatens the Cayman Islands then maybe THAT will finally inspired people in power to take CC seriously.)

6. Oil Rigs at sea are in danger. Irony.
7. Floods are already killing lots of people. Since it is mostly in third world countries the world does not care, but this is foolhardy since (1) the third world produces lots of stuff, and (2) it will hit the first world soon.

8. Page 73

#### **Feedback Loop:**

**Ice melting in the Antarctic releases methane which contributes to Global Warming**

#### **Feedback Loop**

9. **Feedback Loop: Ice melting in the Antarctic: The ice is white and reflects sunlight back into the atmosphere rather than absorbing it. Less ice, less white, less reflection.**

(Not sure I believe this one since even sunlight in the atmosphere is bad.) This is called *The Albedo Affect*.

## **7 Wildfire**

This book was written before the Canadian wildfires. You may ask *which Canadian Wildfires*. Hmmm- I guess that's the point.

Gee- if only the flooding and the fires happened at the same time and place, they would cancel!

The California wildfires affected the rich and powerful so that might help us take CC seriously. The Getty Museum and Rupert Murdock's homes were affected. I have NOT seen this make Murdock take CC seriously.

Even Greenland and Iceland have had wildfires.

#### **Feedback Loop:**

**Feedback Loop: CC causes wildfires which burn trees. Trees are a good Carbon Sink. So less of those means more CC.**

(Page 83) President Bolsonaro of Brazil was in favor of deforestation. His actions will lead to 13 gigatons of Carbon being released in the air between 2021 and 2030. The United States releases 5 gigatons a year. That is A LOT of carbon release from Brazil (and also from us).

## **8 Disasters No Longer Natural**

(Page 87) “Unusual” weather events are no longer unusual. Once-every-500-year events are happening every year.

(Page 89) We are doing NOTHING to prevent floods and other weather events from harming us. This is very important: Even if you want to debate what CAUSES CC, there ARE bad weather events happening, so one needs to prepare for them. Why aren’t people preparing for it? Short sightness? Don’t want to admit CC has any reality at all? Too expensive? Only affecting the poor?

(Page 92) Hurricane Katrina Irony: many of the people who were affected were brought there by the Oil Companies which are of course part of the problem.

## **9 Freshwater Drain**

(Page 94-99) Fresh Water shortage will be a big problem.

(Page 101) There have been wars about water for the last 3000 years. Prepare for more.

## **10 Dying Oceans**

(Page 104) Oceans absorb Carbon but get acidified in the process. This kills fish. Also kills fish’s sense of smell (didn’t know that had one) which makes it harder for them to navigate.

(Page 105) Coral dying. Coral supports 1/4 of all marine life and help protect against flooding.

(Page 106) Ordinary Pollution is also wrecking havoc with the ocean.

(Page 107) The Gulf Stream and other streams serve to regulate the temperature of the earth. This nice setup is being disrupted.

## **11 Unbreathable Air**

Air with dirt in it (perhaps even ordinary pollution) and also lead (Lead Gas, Lead Paint) is not only bad for your lungs its also bad for your brain. Deceasing test scores, increasing rates of ADD. Another of our books said

that if Reagan had regulated pollution earlier, we would have smarter kids. DARN- we need smart people to be able to solve CC but they will be in short supply. Anyway, this is partially caused by CC since Carbon is in the air, but its more important that the SAME thing that cause pollution cause CC.

### **Feedback Loop:**

**The more lead in the air the stupider people get. The stupider people get the less likely they are able to help get us out of the CC and hence the more lead will get in the air.**

10,000 people A DAY die of of pollution. Less than 10,000 have died total from nuclear power. (The way for republicans to get on board with CC would be to propose Nuclear Power as an answer. Prediction: When democrats propose Nuclear Power as an answer, Reps will bring out all of the bogus nuclear-power-is-dangerous stuff to counter it, since (1) the dems proposed it, and (2) going for nuclear power because of CC is to admit that CC is real which is NOT their brand.)

Microplastics are in everything. Same as pollution- not caused by CC but is caused by the same things that cause it. Also microplastics in everything contribute to CC: when plastic degrades it gives off methane.

Irony: Pollution may also help delay CC since it reflects sunlight back into space. The chapter ends wondering if this could be done in a better way- some kind of geo-engineering. Would have to be done carefully!

## **12 Plagues of Warming**

(This I did not know anything about!)

Global warming is releasing long frozen viruses into the air. This has already had affects:

1. Uptick in Lyme disease (pun intended). Japan and other Asian countries had 0 cases in 2010 and now have 100's. In Minnesota Lyme disease dropped the Moose population by 58%.
2. Increase in Yellow Fever.
3. Disease Mutation- Zika



4. The Saiga, a *adorable dwarf like antelope* in central Asia: ALL of them in a region the size of Florida DIED in a few days. More mysterious but seems to just be bacteria that was already in them (I presume doing useful things) reacted when humidity and temp went up. Less is known here, but it seems like the helpful bacteria inside us and animals might be affected by CC.
5. This book was written before there were a few cases of Malaria in America- first time in about 20 years.

Its back:

<https://www.vox.com/2023/7/4/23778786/malaria-us-florida-texas-climate-change>

## 13 Economic Collapse

The usual argument against doing anything about CC is that it will cost too much. This chapter shows that it will cost more to NOT do anything about it. Farming losses, human loss, disease, flooding, normal pollution, loss of real estate, heat warps railroad tracks and other metal. Heat bad for human productivity.

This chapter also discusses a theory of economics which downplays innovation, Adam Smith, and how we do things and lays all of the credit to the economic success since the 1800, to fossil fuels. The book does say that the theory is not widely believed.

This chapter and others is depressing in that it seems like both corporations and consumers prefer the status quo to doing anything.

People who can't afford their mortgage are said to be *underwater*. This may stop being a metaphor and start being reality.

P. 131-132. Computers and technology should have made us more productive but economists wonder why they haven't (actually in academia people are A LOT more productive so I wonder if other sectors are not). One explanation is CC makes us less productive. The author admits that this is speculative. I am surprised and perhaps skeptical that we haven't gotten more productive.

## 14 Climate Conflict

Lots of wars over time, even thousands of years ago, are over water. This is happening NOW as well at an accelerated rate. Other resources shortages will also cause wars and instability and revolutions. Droughts and crop shortages. It may be hard to tell if a war is caused by CC since they claim *the glory of Islam* or *to restore the greatness of Russia* or some such. BUT the number of wars has INCREASED and many CAN be linked to droughts or crop shortages or forced migration which themselves are linked to CC. Because of these complications many policy makers don't see it as CC implies war. And indeed, its more like CC sets conditions that make War more likely.

Most wars are over resources and end up wasting those resources. That is whats happening in Ukraine right now.

The Military is aware of this and tracks this information. Does the Military, a conservative group, believe in CC? It would seem so. To bad their fellow conservatives do not follow suit. I think the Military and Society are now so disjoint now that they really don't talk to each other.

The Chinese construction of the South Sea Islands may be linked to CC.

While not quite a counter-argument, I will point out that there are conflicts that are not about CC. China-Taiwan don't seem to be.

P. 142. Not just wars. Studies show that heat makes crime go up.

## 15 Systems

Not much new here. Says that all of the above bad things feed off of each other. One new things- Also bad for Mental Health.

Looking ahead I am glad that the next few chapters are on a different aspect.

## 16 Storytelling

P. 160. Fiction usually has that the most living people are wiped out by ONE thing and its a singular thing: Nuclear war, Suddenly people can't have kids, an Asteroid. CC is very different-It's a slow death, so hard to make dramatic. Who would be the villain? ALL OF US. Who would be the hero? if we do get out of this it will be a group effort.

More likely is that in the future CC will be an assumed backdrop. Much like 9-11 is now.

P. 161. Socialist countries where the gov allegedly knows best don't do any better on CC. I am reminded that totalitarian countries did badly in COVID even though they really could force masks and vaccines.

P. 165. We usually talk about CC with parables like polar bears dying or other animals going extinct. But WE are being affected DIRECTLY. Those parables, even told by environmentalists, may still be to comforting.

P. 166. Similarly the little things we do- banning plastic straws, no more littering, do NOTHING but make us feel good. Same with the bee-collapse which I was surprised to read is NOT a thing. (These passages also help establish the author as NOT being a crazy liberal.)

P. 170. How much do WE affect the env? 96% of all mammals are either Humans or their livestock.

P. 172. Scientists talk too cautiously about CC. Why?

1. Natural Caution
2. Fear of political backlash (to bad- it happens anyway)
3. Their own fears.
4. Worry that people will grow despondent. (If a Republican p says *YES CC is real but its already to late to do anything about it, so why through away money trying to stop it* that might be true.)

## 17 Crisis Capitalism

P. 174-175 has lots of great definitions! I list them here

1. *Anchoring* Your believes are grounded in a very few examples that may be wrong. For example *its snowing today so there can't be global warming.*
2. *Ambiguity Effect* The notion that we are just not sure yet. In the 1970's to say *I am not sure if CC is really a thing* might have been reasonable. Indeed, our other book was about people who had that uncertainly but never let go of it *we just need one more study to show that cigarettes don't cause cancer. There are other explanations of the*

*data. People who like to smoke may also be predisposed to get cancer, a mere correlation.*

3. *Anthropocentric Thinking* Humans are separate and superior to nature. We'll figure it out. And seeing other species die is of no consequence.
4. *Automation Bias* Let economics run its course. Regulation by humans is always bad.
5. *The Bystander Effect* Wait for others to act. Actually I DO this one, but I feel I have no power to do anything. This book reinforces that by saying that if I don't run my dryer this is trivial. Gov and Global actions is needed. I DO vote.
6. *Confirmation Bias* We do science with the goal (perhaps subconscious) of confirming what we already think to be true- like that CC or COVID or Vaccines are a hoax.
7. *The Default Effect* Always prefer the Status Quo to any change. This has also been a problem for giving groups (black, women, gays) rights.
8. *Endowment Effect* If I am going to give up X then I must get Y where  $Y > X$ .
9. *Illusion of Control / Overconfidence* It won't happen to me, I can handle it. I think of people who refuse and evacuation order in a hurricane, or who don't vaccinate.
10. *Optimism Bias* It will all work out.
11. *Pessimism Bias* Its all hopeless so why bother (I have this one.)

Page 176: Irony- CC requires expertise, unbiased expertise, to tackle, in an age where we have stopped believing in unbiased expertise. I object- I think that we have never lived in an age of admiration for experts. Or at least it fluctuates.

Page 178-179. Europe got ahead of China and other countries because of COAL. Hence it might be unfair to demand that, say, Africa not use Coal. Africa's contribution to CC is minimal anyway.

Page 179. Naomi Klein: The forces of capitalism respond to a crisis by demanding more space, power, and autonomy. This looks bad for CC. (Not quite- Autonomy at times, and bailouts at other times.)

The reaction of America to Hurricane Mara (Puerto Rico) is an example of how Capitalism responds to crisis, and its not good.

P. 184. There are some lawsuits about CC in the works- Island Nations suing the people who made CC happen, Kids suing adults (Julianna VS the United States). The author is neutral on how this will turn out. I am very negative. The blame game:

1. CC is a systematic problem for the entire world. Its easy to blame the West or to blame America or even to blame the Republican Party. BUT too-slow-of-action on CC is also happening in... **EVERY COUNTRY**. So while the Rep Party is to blame, so also are ALL other countries.
2. Lets say the plaintiffs win and get... Money? So what? CC will still be a problem. And I doubt the lawsuits will force companies to reform in any meaningful way.

P. 186. Even if we halt CC still costs lots to even maintain our current living conditions. Decarbinization, building flood-protection, etc.

## 18 The Church of Technology

There is a notion that technology will bail us out. This looks unlikely for both political reasons (the problem has to be acknowledged and research paid for), technical reasons (we don't have enough time).

Silicon Valley is more concerned with run-way-AI than with CC. Why? Because run-away-AI is tech and a simple story. CC is systematic.

P. 191-194. Nick Borman has a list of 23 existential risks. CC is one of them, as is AI. This is impressive since most people can only think of one or two existential risks. (I could not find the list anywhere. Nick Borman is not on Wikipedia. Very odd since he seems a lot more important than William Gasarch who is.) He also thinks that the risks and realities may make us jump in evolution to post-humanity. I am skeptical of that.

P. 194. Going to Mars or a space ship is not feasible in the short term and probably not even in the long term.

P. 195 More unjustified optimism.

P. 196 Even though Solar is competitive with Fossil Fuels its STILL not being used! Why? First off, technology and the green revolution have made

BIG breakthroughs. But they end up being used WITH current energy and crop techniques and not INSTEAD of them.

Money Quote (P. 197):

*We just haven't yet discovered the political will, economic might, and cultural flexibility to install and activate them (green stuff of any sort) because doing so requires something a lot bigger, and more concrete, than imagination—it means nothing short of a complete overhaul of the world's energy systems, transportation, infrastructure, industry, and agriculture.*

It would seem that in the third world where they did not have such structures in place it would be easier- but it does not seem to be.

P. 198. Quote from William Gibson:

*The future is here, it's just not evenly distributed.*

The author gives outdated evidence by pointing to that (when the book was written-2019) only 10% of people had smart phones. Now its 86%.

P. 199. Making concrete puts a lot of carbon in the air.

P. 201-204 is about nuclear energy. Biden signed a big bill funding it (post-book). When he wrote it he said that Nuclear is unpopular with env since they think of natural (e.g., solar and wind) as being better than (in what way? unclear!) than technological (e.g., Nuclear). They are wrong.

P. 204. Technology is distracting us from CC.

Kate Tempest:

*Staring into screens so we don't have to see the planet die.*

## 19 Politics of Consumption

P. 207 We rarely make political stances that are against our own prosaic interests. NIMBY. Applies to Liberal and Conservatives.

P. 207-209. Your vote is much more important then (say) going vegan. I wonder about this one since even if you vote for someone who seems to take CC seriously, they can't do much. Consumer choice is NOT a substitute for political action. I am thinking of the app bi-partisan. Oddly enough, the current Budweiser Boycott might actually be effective.

P. 210. Neoliberalism was a philosophy that capitalism could HELP CC and other problems and could be win-win. It has worked some—nations that trade rarely fight, the market has brought great things, BUT the crash of 2008 and CC are evidence that it needs a rethink. The author thinks that

the crash of 2008 was a big turning point, though I think capitalism always had problems.

What will replace Neoliberalism (also called the God that failed)?

Name of replacement	Different Nations?	Capitalism?	Examples
Climate Behemoth	YES	YES	American and most of Europe
Climate Mao	YES	NO	Russia and China
Climate Leviathan	NO	YES	
Climate X	NO	NO	

CHINA is the most important player in CC.

None of these seem feasible to solve CC.

P. 214. Some nations are responsible for CC, and some will suffer. These are, alas, not the same.

1. India's share of CC burden is 4 times its CC guilt.
2. America's share of CC burden is about the same as its CC guilt.
3. China's share of CC burden is  $\frac{1}{4}$  of its CC guilt.

CHINA is the key. The US and Europe have already reduced emissions some and it might not be possible to do more. But China really can. Will they?

Out-sourcing carbon: If China makes X instead of the USA and sells it to the USA, and making X emits carbon, then whose fault is that carbon?

P. 217: Many of the wars that are said to be ideological are actually about CC. I am skeptical of this since there were plenty of wars before CC. It may be that wars are always about resources even if the ones who start them claim its ideology (e.g., religion). Was the Crusades actually about resources?

## 20 History After Progress

(This chapter seems a little out of place.)

The books *Sapiens* and *Guns, Germs and Steel* and others argue (and I think the author agrees) that going from hunting and gathering to farming was a mistake. The change DID introduce income inequality and red tape.

P. 220. The following quote I find interesting:

*We are still now, in much of the world, shorter, sicker, and dying younger than our hunter-gatherer forebears, who, by the way, were far better custodians of our planet.*

With modern medicine this seems false. BUT many people do not have access to modern medicine. Also, there are many illness's that just didn't happen to H-G's. One thing- I am sure we have better teeth- Hmmm- those of us who have regular dental care. Hmmm- H-G's didn't eat Pop Tarts.

More generally, we tend to think of history going in one direction and the world as getting better. MLK said

*The arc of the moral universe is long, but it bends towards justice.*

Inspiring but utterly false.

James Scott says that belief in Progress and Rationality has replaced the discarded beliefs in Religion and Superstition.

## 21 Ethics at the End of the World

CC or the notion that CC will destroy the world has already lead to some cults and may become a mainstream belief that changes how people think, how they act, their ethics.

Some people claim to welcome it- either because we have no more a right to live than animals, or because we deserve it, or because it will force us to go back-to-nature. There are other reasons as well. Inhumanist is the term for valuing other species more than humans.

People who predict the end of the world are often laughed at. Maybe not this time. And maybe this time they are right.

P. 233-234. Ted K gets a name check. His manifesto was correct! Really?

Ecofacism- need to get rid of all the non-whites so that the planet will survive. I find this rare since most racists are also climate-deniers. This is part of the more general problem with politics: you join a party for reason A and you end up absorbing reason B as well. In this case The Proud Boys are Trumpites because they are white nationalists, but since they are Trumpites they MUST now also be CC-denialists.

On the left there is growing admiration for President Xi of China- though this might be misplaced since he talks a good game but isn't doing much.

Climate Fatalism- THATS ME. I am SURE that CC will destroy a lot of the world (one can quibble about how much) and will make people's lives, even rich people, much worse, AND that its INEVITABLE.



We might just end up living with it and accepting how bad it is. Similar to living and not caring that every year 42,000 people die in car crashes.

## 22 The Anthropomorphic Principle

(This chapter seems odd in this book.)

Why have we not found intelligent life on other planets or had them find us?

1. Earth is the only planet with intelligent life. This seems to NOT be one of the possibilities considered. Some fancy math with LOTS of guessing seems to show that the probability of intelligent life elsewhere is high.
2. The other intelligent creatures are way ahead of us technologically and have found a way to hide from us.
3. The other intelligent creatures are way ahead of us technologically and don't want to interfere. (Do we assume they have a *prime directive*?)
4. The other intelligent creatures are way behind us technologically so they can't find us and we can't detect them.
5. The other intelligent creatures killed themselves off via climate change.

And now back to CC:

P. 252 gives the solutions that we all kind of already know:

*consider that we have all the tools we need, today, to stop it all: a carbon tax and the political apparatus to aggressively phase out dirty energy; a new approach to agricultural practices and a shift away from beef and dairy in the global diet; and public investment in green energy and carbon capture.*

He does say that just because its doable does not mean we will do it. I cannot imagine America doing any of this.

## 23 Afterward

There is some optimism and pessimism here. Greta Thunberg and some EU promises to cut emissions, but not China, and not enough. Also USA is not

on board at all. (This was written before Biden's Inflation Reduction Act which is also an env bill.)

The book did not use the term *Greenwashing* but there is a lot of it and that's also a problem.

Those who are most causing CC are also the ones most protected from its effects.

Our only hope is if the Cayman Islands go underwater :-)

## 24 Criticisms of the Book on Amazon

### Some of the 2 Star Reviews

1. The stuff about dinosaurs being killed by a meteor- the book says it's false, and it may be true. This is why the guy gives the book 2 stars? This is a really small part of the book- so small that I had to relook at the book to recall it.
2. The book is correct but does not point out that cutting the population rate by a lot would help a great deal. I take this NOT as a criticism of the book but as an interesting thought:
  - (a) Can the world cut population growth in a humane way?
  - (b) How much would it help?
  - (c) Is it already happening?

I DO find it odd that *The Economist* and other magazines say that declining population growth is a problem. I think it's good! The articles do say that we are losing a lot of manpower, but even they concede that if we could train better the people we do have (e.g., poor people) we could overcome this.

3. Writing style: Run-on sentences, choppy sentences, repetitive, lacks direction. These are fair points, though I care more about content than style.
4. Has very little on solutions. This is a fair point- there should be more on solutions. However, the point of the book is a wake-up call. Step 1 of AA is to admit you have a problem. For some people, we haven't even gotten that far on CC.

5. The book is depressing. True! The topic is depressing.
6. Dislikes the solution of *vote the right people in and they will fix it*. Solutions are such a small part of the book, that giving it 2 stars for the books comments on that seems odd. Its more fair to give it 2 stars because how little is on solutions, rather than because the little they have is inadequate.
7. The book is to OPTIMISTIC. Saying that humans will survive until 2100 is absurd- 2030 tops. THIS objection I agree with.

### **Some of the 1 Star Reviews**

Many had the same complaints as the 2 star reviews, so I only include new complaints.

1. Its bad to tell us that our own efforts are not going to do anything.
2. Leaves out that animals will die, and other really bad things.
3. No data, no footnotes, etc. This is a fair point though I don't think it makes the book 1 star.

NONE of the negative reviews challenge the book's basic premise that CC is here, is man-made, and is a serious problem. This surprised me- no negative reviews from climate skeptics. Maybe they didn't bother reading it.