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Introduction

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Harold: God bless the internet, you know, you can be your own investigative journalist. If you come at it with the right frame of mind

In the middle ages, Imperial China was taxing orange groves several hundred miles north of where they grow today

Meet Harold Senecker: A Retired Journalist

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Tom: My guest today is Harold Senecker.

Harold: , I'm a retired journalist. I was, I have a career in business and financial journalism as a writer and editor. And, uh, it taught me the trade of trying to figure out what's true and what's not true.

It taught me a lot about not trusting, uh, the truthfulness of people in high places. And it's, it's invaluable if you start looking into, uh, things like AGW, anthropogenic global warming.

Tom: All right.

Creating the Forbes 400

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Tom: And one of your main claims to fame in the past is helping to create the Forbes 400, right? I'm very interested in that.

Harold: [00:01:00] Oh, yeah, yeah, you know, uh, the inspiration was, uh, the late Malcolm Forbes, but the perspiration was all mine. You know, the, uh, the editor at the time, a brilliant guy, uh, who was kind of doubtful about that project. So, uh, He called me into his office one, one Friday afternoon, which is the time when you fire people and, uh, laid this task entirely on me, said, you know, it's yours to design.

It's all right if you fail. And then he left for a month's vacation. So I was handed this thing and, uh, immediately saw the possible, uh, the importance of it because there was an awful lot of propaganda

about the rich and, you know, they're heroes and villains and like [00:02:00] everybody else. And I could tell there was a darn little fact about them.

And so I saw, hey, this is an opportunity to fill a big gap in public knowledge.

Tom: So did you have a whole team of people helping you do that research, or was it all about you crossing the country and figuring out ways to get the data?

Harold: Oh, it started with me. And I got, I inherited one researcher. And, uh, you know, uh, somebody had done a little pre research and found a guy who had been doing.

Uh, uh, collection collections of rich people in various cities, you know, uh, and had a bunch of files and he was getting out of, uh, moving on to other things. So we bought his files and that gave us some material to start with and added researchers. We went along. It got bigger and bigger and bigger because it was [00:03:00] nationwide and.

Early on, I saw, hey, gotta put a limit on this, and the 400 was a conscious and somewhat ironic, uh, reference to the society 400 of the 19th and early 20th century. They were all inherited wealth, and it was, we got into it, we found that, well, there were some inheritance, but an awful lot of it was basically self made.

And so, and It opened, it opened a lot of windows, and by the time we were done, there must have been about oh, eight or ten researchers, and you know, an assistant who did a lot of the grunt work for me, and it got pretty hectic toward the end, but we managed to make our publication date. You found

Tom: all sorts of independent ways to check things, right?

Like how much [00:04:00] real estate sold for that's publicly available and, uh, chunks of publicly owned stock, all that stuff. Yeah, yeah,

Harold: yeah. You know, a lot of them, some of them at least, were publicly held companies. You could look up their holdings in the proxy statement. Um, yeah, real estate, you can go, you can indeed go look it up.

Privately held companies, you kind of have to play investment banker. Try to figure out what they've got. Try to get a line from others in the industry that are competing with them about how much they owe. And, uh, and figure out and look at the comparable companies and figure out what the thing is worth.

So, uh, So it takes some, it takes some investigating.

### Investigating Anthropogenic Global Warming

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Harold: All of this is preparation for the time much later when I ran across [00:05:00] anthropogenic global warming.

Tom: Okay, yeah, let's talk about that. Was that about the climate gate time when you really started to dig into that subject, or when was that for you?

Harold: Well, by then I was already retired.

But no, I still remembered how, uh, how to do reporting and, uh, uh, remembered especially how to be, uh, skeptical of what people tell you. And so it got to be, uh, so all of that experience turned out to be quite useful for this project., I discovered at the time, this is fairly early on in, in this controversy, uh, the punitive main source.

### The Controversy of East Anglia University's Data

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Harold: That everyone was quoting was, uh, the East Anglia University, an otherwise rather obscure, uh, college in Wales, England, that [00:06:00] decided to make itself the, uh, the fountainhead of information about global warming.

And, You know, took a look at when I went to take a look at it. I was a little startled because, you know, they wouldn't release their data or their methodology. They said it was proprietary. I'm thinking, Huh? Wait a minute. You know, my freshman science course in college, I learned that's not how you do science.

What you do with science is you publish the data, you publish the methodology, and you invite Uh, comment and criticism because that helps things move forward. I mean, that's the way you do science. They do peer review and all like that. They weren't doing that. They said, you know, there's a rat in here someplace.

I [00:07:00] can smell it.

Tom: And then you've blogged in in great detail about this at Harold Seneca's Climate Discussion, right? I'm going to put a link to that in the show description so people can take a look at your blog and see the detail that you put into this debunking, right?

Harold: Well, uh, some of it, I mean, you know, there's, uh, there's actually quite a lot of material, but you have to go digging for it.

And, as I say, when you start going digging, you have to remember the basics of journalism. Uh, one is, you get as close to the primary sources as possible. You know, the secondary sources, uh, uh, have the risk of omission and bias. And when I started doing that, I found The things were not adding up and what came into play was something, when I was at Forbes at the time, we had a managing editor, Shelley Zelaznik, who [00:08:00] would sometimes quote his grandmother in story meetings when it was appropriate, and it often was.

It would say, as Mother Schneiderman used to say, If it doesn't make sense, I don't believe it. Right, excuse me. Mother Schneiderman was one of our most valuable editors. And she's a guide for all of us. So, I took more looking at it, and I'm looking at it, and the first thing that came up was, Hey, you know, you know.

The Medieval Warm Period and the Hockey Stick Graph

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Harold: What about, uh, the little ice age in the 1600s? What about the medieval warm period? You know, because it didn't, it didn't correlate to what, uh, East Anglia was saying. And then there was the famous hockey stick graph by Michael Mann. [00:09:00] You know, uh, a professor at, I'm sorry to say, at my alma mater, Penn State, which is otherwise a very fine university.

And it shows things going back to, you know, the dark ages, and it graphs global temperatures, and it kind of does little wiggles, and then all of a sudden, you get to the industrial era, and it shoots up like a skyrocket. And I'm thanking. Um, wait a minute, you know, the first thing was the Little Ice Age has disappeared.

Now, this is a cold period that, especially in the 1600s and into the 1700s, you know, tailed off as that century ended, uh, in which Among other things, there are lithographs of, uh, of the Thames River in London [00:10:00] freezing over so solid that people would come out and set up booths and have a sort of winter fair on the ice.

And, uh, the Thames River does not freeze remotely today. So, uh, where'd the Little Ice Age go? So are you

Tom: surprised that in 2024 people are still defending the hockey stick? But like I've said elsewhere, um, this future is way more stupid than I thought it would be. I, I, what do you

Harold: think? I'm not surprised anymore.

I am disappointed. But anyway, the little ice age led me to the medieval warm period. And lots of people, oh, medieval war didn't exist. Or, oh no, it was just regional. And that was something you could do a little research on.

## The Role of Journalism in Climate Change Research

Harold: God bless the internet, you know, you can be your own investigative journalist. If you come at it with the right frame of mind, it turned out that, uh, [00:11:00] well, you know, there aren't really good records and no temperature measurements at all.

In the middle ages, you could find out that in China, Imperial China was taxing orange groves several hundred miles north of where they grow today. So it wasn't just regional to the North Atlantic.

Tom: Very interesting. That's a nugget that I don't remember ever hearing before. . Yeah.

Harold: Yeah, I know. And there were, there were different nuggets like that that came up.

You know, uh, there's a, uh, there was an Indian tribe, uh, I can't think of a name just now because this goes back several years, that, uh, archaeologists could trace their settlements along the Gulf Coast and the Caribbean, and during the, uh, the Medieval War period, they could find settlements that were kind of worked their way up [00:12:00] the Mississippi River.

They apparently depended rather heavily on palm trees for, uh, things like canoes and stuff. And then as the Gorham period ended and things got colder, the archaeology, uh, evidence decreased. It shrank back to the Gulf Coast. That's, you know, and that's a pretty good indicator.

Tom: That's another thing I had never heard before.

So yeah, if you have more of

Harold: those, yeah. Well, uh, so I, yeah, I kept running into stuff like this, you know, uh, so there was indeed a medieval warm period. And it turns out, if you do further research, that there was a Roman warm period around the time of Christ and a cold period in between, which is when we had the dark ages.

So there went Michael Mann's hockey stick.[00:13:00] And, you know, a damning email got circulated, uh, published and circulated around it, uh, which is saying, Hey, we got to lose the medieval war period. Uh, this is not the kind of person you want to rely on. Yeah, it still

gets used. And like, uh, like I said, I'm not so much surprised anymore as disappointed.

Tom: All right. And you're active on Twitter to this day, right? Like even today, you've been out there tweeting, uh, looking at stuff and debunking it.

Harold: Yeah. Yeah, I do. Um, what I basically do is really kind of try to lead people to, uh, this blog spot that I, uh, that I posted, which is not exactly a blog. It's just a series of essays and, uh, information, uh, basically debunking the.[00:14:00]

The global warming myth.

The Impact of Carbon Dioxide and Methane on Global Warming

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Harold: It's not that there isn't global warming. There is, you know, we've come out of the little ice age, you know, and it's not that CO2 doesn't have any influence, but it's clearly greenhouse gas, it absorbs infrared radiation and it turns it into heat, but some of it anyway, into heat, it's the physical property of it, but how much, you know, and to what extent.

So, uh, mostly I'm trying to steer people to that because you cannot get it into 240 characters. God knows I tried.

I must say the, I'm seeing signs of progress. More and more people are skeptical, you know, fewer and fewer of the responses I get on Twitter have been, uh, hostile [00:15:00] denunciations. Um, more and more of them are saying, Hey, I like that. Thank you. You know? So I think.

Harold: The proper skepticism is finally seeping into the public consciousness, so I'm kind of hopeful about that. Uh, what do you think is

Tom: going on? I don't know if you are still connected at all to Forbes itself, but they are still publishing crazy stuff about whatever climate cult stuff that, that disappoints me.

What's happening there?

Harold: What happened there is that, um, uh, Unfortunately, Steve Forbes, Malcolm Forbes Jr., you know, who inherited the mantle, uh, ran for president. And, you know, uh, uh, I have, I have sad to say, a foolish thing to do, but, and put 60 million into it. And when, uh, [00:16:00] when things turned negative, uh, after the millennium and they ran into trouble, they, they wish they had the 60 billion back and they didn't, and they had to sell them as I had the magazine.

So they got no owners. And more recently those owners sold it to other new owners who are, are saying, Hey, we want to, we want to do good. And that's, I'm all in favor of doing good. But their idea of doing good is not, shall we say, my idea of doing good, especially on this subject. Yeah, they say a lot of crazy stuff.

Uh, I'm sorry to see it.

Tom: Well, I am encouraged that, uh, the rise of the Epoch Times, there's Katie Spence from the Epoch Times that's writing these great [00:17:00] articles just in the last couple months even, that is helping to expose the bad data and everything. That part makes me happy. I don't know if you've read any of that

Harold: yet.

Um, I'm sorry to say I haven't caught up with her, I, uh, you're reminding me that I should. But yeah, that's what I, that's another nice thing that we're getting alternative journalism. It's not just the corporate media, you know, and you're getting skeptical voices. And people and institutions like Epoch Times were willing to Publish facts that don't fit the general narrative.

Another sign of hope.

Tom: I'm curious, if you yourself, if you spend much time reading, uh, at WhatsApp with that, or Tony Heller's stuff, or are you mostly just independently going and looking at the, uh, the primary data yourself?

Harold: I'm, I'm mostly independent, but you do want to keep your antennae [00:18:00] out for new stuff coming up.

Tony Heller's an interesting guy, you know, and he's, he's qualified to get into the, uh, get into the weeds on, uh, little things like adjusting. Past temperatures. Um, uh, remains to be seen how general that is. You know, he's mostly against attacking the records of the NOAA, the, uh, the, uh, the U. S. federal outlet.

And, you know, he does individual charts. They're beginning to add up. You know, it remains to be seen. Whether it's cherry picking or whether it's, uh, abundant and remains to be seen to what extent the N O A is influential internationally. So I'll wait and see a little bit. But the stuff that Tony Heller is [00:19:00] coming up with is pretty damning.

And, uh, Unfortunately, uh, we have a government that lies in almost every other way whenever it suits itself. It's not surprising that they're lying this way.

Tom: Uh, Tony's a site, he's got a site called Real Climate Tools. I believe that's the correct name. That, uh, where you can go yourself and look at the data for yourself.

He's helping, uh, Make it easier for you and I to go in and check individual locations. So that's something to think about.

Harold: Yeah, yeah. I'm really glad he's doing that. It's a very good sign for Tony Heller. And I would invite people, you know, to do that. I mean, doing that kind of thing takes some work and time and effort.

And, uh, you know, you do have to learn a thing or two. And, you know, and most of all, you've got to remember my mother's an artisan.  
[00:20:00]

Find myself mostly getting on things like Twitter. Uh, getting on my comments pages on the, uh, website of the Financial Times, uh, because the, I think their audience has a lot of potentially influential

Tom: people. Ah, okay. So you're, you're commenting out there and I, I saw at least one comment of yours at Real Climate.

So you are in the comment sections at various places, I guess. Uh,

Harold: yeah, more, uh, more of the FT than, uh, than most others, but when I can.

Tom: Are you getting any other support from skeptics at the FT or how's that going over there? Yeah.

Harold: The FT is all in on global warming, and it shows, and you know, another disappointment to me as a journalist who takes journalism seriously.

Uh, I've noticed that, uh, the, uh, on the FT common pages, when I [00:21:00] first started doing this and pointing out the, uh, the science behind it, uh, uh, I was at first deluged with it. Lots of people denouncing me as a shill for big oil and, you know, uh, and a damn fool and various, various other things. And they were pretty easy to rebut because it was all out, ominous attacks.

But lately I've noticed that there are fewer and fewer of those guys because they didn't like being embarrassed, I think. And more and more people. Who are, uh, sharing my skepticism in the FT. I think that's a very hopeful sign, too. I just hope there's a lot more of it.

Tom: That's great. There's a lot of different battlegrounds.

I don't know if I've spent any time out there, uh, in that comments section. I'm [00:22:00] so glad you're doing that. Uh, are they, is



anybody deleting your comments or are they're leaving them up at least? Um,

Harold: they're leaving them up, however, early on somebody, somebody complained, and they decided, they have a rule against spamming, and so, while I put my comments up, otherwise, they don't let me post the, the link to my blog, you know, I can take the relevant. Uh, facts and, uh, and put those in, and sometimes I can do links to sources for that.

It's pretty clear that at this point, the existing carbon dioxide in the atmosphere is already absorbing the great majority of the heat that it's capable of absorbing. Figures, estimates run between [00:23:00] 80 and 90 percent. It's close enough. You get the idea. As you, as you go up the scale and start absorbing more, it gets harder and harder.

Harold: You know, the easy one, hey, easy frequencies get absorbed first, and they're pretty much saturated, meaning it's fully absorbed or turned into, uh, to heat and radiate back down to the earth and giving global warming. And what's left is what they call, uh, the, uh, the wings of this curve, uh, bell curve, uh, uh, that it produces when you graph it.

And. Those are more difficult. And also, there's less available. So, the carbon dioxide ability [00:24:00] to absorb more and produce more heat diminishes because it gets harder and harder for it to do. It's called a logarithmic relationship between global warming. And carbon dioxide in the atmosphere and it's pretty much generally accepted now that there's a, there's a particular equation for it, which you can look up and if you graph that equation.

You find that, uh, we're now at the point where, you know, it's, it's leveling off. Each unit of additional global warming requires twice as much carbon dioxide as the, uh, the unit before. Now, you've, I'm sure you've done [00:25:00] and actually had the exercise of successive doublings at some point in your life and you, you know how, uh, how quickly that gets out of hand.

Well, it's starting to get out of hand. So, the rate at which you can do that is slowing down, is slowing down. Now, eventually, it gets to a point where it gets too small to matter, and, you know, you can draw the curve for, uh, for yourself. There's websites you can go to do the, to do that when you plug in the formula.

And, You can see how it flattens out. It's a judgment call. I would say that if you had around 2.7 or 2.8 degrees Celsius, it's getting too small to matter anymore because [00:26:00] the next unit is going to take a couple of centuries. You know, um, No,

Tom: I do. I do have a related question here. Uh, just this week, there's a YouTuber named, I don't know how to pronounce her name, Sabine Hassenfelder.

And she's saying that maybe the sensitivity to double CO2 from here may be as high as seven degrees centigrade. And if that happens, um, our economies might collapse in 20 years. Do you have any comments on that? Sounds completely crazy to me. Uh,

Harold: Well, yeah. You know, I scarcely know where to begin. one is what I, well, let's begin with what I was just saying.

You know, you're not gonna get to two point a, you're not seven degrees anytime in the foreseeable future. Not at least not from greenhouse gases. The other is [00:27:00] that, uh, the geological record. Using, uh, presence of isotopes and other measures, you know, uh, indicates that carbon dioxide concentrations in the atmosphere in the geological past were several times what they are now.

And temperatures were warmer, but they weren't seven degrees warmer, you know? So it, it kind of fails the, it kind of fails the test of, uh, of what we know of reality, . And actually, if you look at the world, the temperature. Very, you know, the average temperature is 59 Fahrenheit, it's like 15 degrees [00:28:00] Celsius, but that's an average.

The average, the temperatures near the equator in the tropics are substantially higher and they stay that way. Because it's the equator, the sun is always shining directly down on it. And if you, if you look at, uh, uh, uh, uh, uh, the appropriate world maps, you'll see that there, you have a much greater proliferation of life and a greater proliferation of human life.

In the tropics than you have anywhere else on the planet, because it turns out that carbon dioxide is essential for plant life, and it turns out that warmth is essential for plant life, and plant life does well, does better at warmer tropical temperatures than it does at temperate [00:29:00] ones, astronomers, Uh, looking at the exoplanets they've been finding, uh, one of the things they want to do is look at ones that could possibly sustain life, or life as we know it anyway.

It turns out that, uh, as part of their quest, They figured the, the ideal temperature for life as we know it is about five degrees centigrade higher than the world average, something like 20 or so degrees rather than 15.

So, you know, it's, we might, the world spent a lot of its time as a tropical planet, and it's better off for it. And, you know, I think she underestimates civilization.

Tom: I do have a related point I wanted to [00:30:00] make here. I've made this on Twitter a few times, that where I'm sitting here in Minnesota, the annual average temperature is about 45 degrees Fahrenheit.

And, uh, in the Maldives, it's called Paradise, the average annual temperature is in the 80s. So, but yet we're told if it warms a little bit here in Minnesota, it's going to be so terrible if it warms to 47 degrees. It's just, it doesn't pass any sort of smell test

Harold: at all. No, it doesn't. And, you know, frankly.

If in a couple of centuries, uh, we've got, uh, Baltimore Orioles roosting in magnolia trees in Minnesota, I know it's not going to trouble me at all. I don't think it would trouble

Tom: you either. It would not, no.

Harold: Incidentally, if you get those temperatures, an interesting thing about rising temperatures. You will often see the point made that the temperature rise in the Arctic is like four times as fast as the rest of the world. That's true, but it's, you [00:31:00] know, you have to look at the yeah but side of it, an assertion like that.

The yeah but side is that the reason that's happening is that In the tropics, tropical regions and around the equator, the temperature is hardly rising at all, is not rising in general, maybe a little bit in dry deserts. Where there's no water vapor, but it's stationary because the radiation from the earth is already saturated.

It's already fully absorbed or close to it at the equator. And in, uh, and not so, uh, in the higher regions where it's colder, there's less water vapor. Water vapor is really Biggest, uh, greenhouse gas of all, and it's essential to our, uh, being, uh, to life. [00:32:00] So, and the sun comes in obliquely, and, you know, there are times when there's no sun at all in the Arctic, you know.

So it gets damn cold, you know. But, you know, uh, as a result, there's a lot less saturation in the northern latitudes. So there's more room for it to increase.

Tom: Yeah, that's a great point that when they're trying to scare us, they want us to think that the high temperatures on the equator are going to get so hot that people can't live there.

But it really is temperatures at night and it's temperatures in the coldest parts of the earth that the greenhouse effect is supposed to make warmer. So again, it's not dangerous. Yeah,

Harold: exactly. There's an awful lot of stuff like that. And, you

know, if we can encourage people, if you can encourage people to approach these kinds of assertions with a skeptical mind, and I [00:33:00] think it will help an awful lot, because there's a pretty much concerted campaign to stampede people.

And you got to resist being stampeded.

Tom: Do you think we are at, past the peak of that stampede? Because I think we are past the peak.

Harold: What do you think? I have that impression. I think so. I hope so. And part of it is, is the reality of what the remedies that are proposed will do to people. They begin to sink in, people are beginning to see how it can relate to them, and then they say, hey, wait a minute, you know, mostly you'll go along well, you know, newspapers say this, the TV says that, yeah, okay, you know, I'm all for saving the planet, you [00:34:00] know, but if it turns out that, um.

You know, you're not going to be able to cook on a gas stove anymore, you know, you know, uh, you're going to have to spend 15 or 20, 000 to replace your, your gas furnace with, with a heat pump and the heat pump will work less well in the cold than it will. And you begin to say, and you begin to see things appearing in the press saying, Hey, you know, it'd be better for the planet if we give up eating meat and start eating, uh, ground up insects.

Uh, yeah, it gets people, that sort of thing is getting people's attention. And then they begin to, they begin to ask questions. And when you begin to ask questions, you begin to get answers. [00:35:00] So yeah, I have a feeling we've passed the peak. I really hope that you and I are right about that.

Tom: Uh, did you want to mention anything about Milankovitch cycles?

### The Influence of Milankovitch Cycles on Earth's Climate

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Harold: Uh, yeah. You know, one of the things, uh, uh, maybe the most important single thing is Milankovitch cycles. Yep. Milankovic was a professor, a Serbian, who happened to be teaching at a university in Vienna when World War I broke out. So, he was too hungry, he interned him for the duration, and he had plenty of time on his hands.

He spent it studying. The possible effects of, uh, astronomical factors, new gravitation, uh, not only the sun, but the other planets and the orientation of [00:36:00] the Earth, uh, Earth's axis and seeing what effect they might have. Uh, on the earth. And it turns out that there's a, well, there are several cycles that it came up with,

you know, when you combine them and you get a grand Milankovitch cycle, it goes around 100, 000 years or so.

And the striking thing about it is that at the beginning of the cycle, there's a very sharp peak in, uh, in, uh, temperature on the earth on the amount of. Sunlight that strikes the northern latitudes of the earth and, uh, then it falls off fairly rapidly and it has various fluctuations, but it's been repeating, you know, you can go back over the last four and five, four or five of these cycles [00:37:00] pretty readily.

There's plenty of data. There's less data the farther back you go, but you can still see them. We happen to be at or near The peak of one of these, uh, of this Milankovitch cycle. So, the Earth is as warm as it gets, or nearly so, to begin with. And, there's some fluctuation in exactly when the peak arrives, or not.

But, which probably is other factors than the astronomical winds Milankovitch dealt with. But, it's strikingly regular. And, like I said, we're at or near that peak. Well, carbon dioxide is adding its little bit to that. But it's fairly small compared to the magnitude of the cycle. So, in the [00:38:00] future, we, I'm sorry to say, our descendants, if there are any, are going to have to worry about ice ages.

You know, it's, uh, the thing about, uh, the Milankovitch cycle is there isn't a damn thing human beings can do about it. And, you know, God does not seem inclined to interfere.

Tom: I'm just looking here that it looks like the Milankovitch minimum, according to Wikipedia, is coming up in the year 11, 800. Does that sound about right?

That, that's when the minimum would be, so we, we could, uh, in the big picture be cooling between now and then? That sound

Harold: right? Yeah, in the big picture, you know, it could show up any millennium now. What do you

Tom: think is the shortest time period over which we could see actual changes, uh, climate changes, Milankovitch related?

Could we see them over, uh, like the [00:39:00] next hundred years or is that too small of a time period? Much too small. Much too small.

Harold: Yeah. That's what we were talking about. Um, at least a hundred thousand year cycle, maybe a hundred twenty, uh, and so one hundred years is practically nothing. But haven't I read that,

Tom: uh, we could descend into an ice age very abruptly for some

reason, maybe not for Milankovitch, but for some other reason?

That there could be a sudden drop, we don't know when. Is that true?

Harold: Uh, I have not seen that. And, no, I, uh, I don't know of anything that would, uh, extent that would cause that. Um, We don't know what we don't know, so I'm not predicting anything.

Well, it would certainly embarrass the global warming crowd, wouldn't it? Yeah. Um, there are fluctuations. [00:40:00] And, you know, you can read it in the geological record too, and, you know, the historical record. Uh, but no, I, uh, I'm not aware of what would cause that. You know, in fact, to the extent that greenhouse gases have an effect, Uh, we're seeing some acceleration over in time because a lot of countries, especially China and India, but also all the other developing countries, are building fossil fuel power plants as rapidly as they can.

And so the amount of, the amount of carbon dioxide. Uh, per year is increasing, and it may, it may accelerate a little bit more. So, that would tend to maybe boost, uh, boost temperatures a little bit. It'll [00:41:00] also accelerate the time when we reach the top of that curve, of the relationship between carbon dioxide and warmth.

Uh, it'll come sooner rather than later.

Tom: It does seem to me that, uh, based on what we know, there has not been any monotonic increase in warming, just a little warmer every year for a long time, or a little cooler every year for a long time. It seems like it's just jumping around a lot, and there's, uh, there's ups and downs on all different time scales.

So even if it does cool over the next 9, 000 years, there'd be lots of periods of warming probably also in that period. Yeah, yeah.

Harold: You know, there are, there are fluctuations. You know, uh, the Milankovitch cycle itself is a combination of several such fluctuations. For instance, the Earth's axis is tilted, but there's a phenomenon called precession.

In which the tilt shifts [00:42:00] in a circle at the moment it points at Polaris North Star, but at other times it does not. And that precession will change the tilt of the Earth in relation to the Sun. And that will change the amount of Uh, solar radiation, uh, striking, uh, the northern hemispheres, actually the northern latitudes, which is new, which is important because that's where the majority of the world's land surfaces exist and where people exist.

And if you're going to have an ice age. You need permanent glaciers, you know, and land areas is what you need to have permanent glaciers.

So, that's a 15, 000 year cycle. It has a significant, it has significant effects, um, [00:43:00] because one of which I was startled to learn the other day is the Sahara Desert.

About 7 or 8, 000 years ago, it wasn't a desert. It was grasslands and savannas and occasional forests and there were elephants and rhinoceroses and you can find there the fossil remains of them under the sands today, but that's, you know, the other side of one of these precession cycles on the side we're on solar heat is higher.

At the time of the African monsoon, and it interferes with the African monsoon, so they don't have an African monsoon anymore. And, and you, you end up with a desert. So that's precession. But there are other, there are other ones too. [00:44:00] Um, one is, uh, the earth's, uh, orbit around the sun is an, is an ellipse. You know, it's almost a perfect circle is not.

And so there's one point in its orbit where it's closer to the sun and one point where it's farthest away. And it makes a difference whether, you know, the tilt of the axis. Is toward the sun in the northern latitudes when you're at your closest approach and then when, uh, then when you're at your farthest approach and that changes slowly.

So, you know, there are periods when we're getting more sun for that reason and periods when we're getting less. So the Milankovitch alone knows it. There are other things that happen too.

Conclusion: The Future of Climate Change Debate

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Harold: El [00:45:00] Nino is where, which everybody hears about is an example of that too. Periodically the, there's an oscillation in the Pacific Ocean.

I'm not sure anybody knows exactly why it happens, but sometimes the, uh, there's a shift where the waters surface. Waters are warmer of Coast South America, the eastern side of the, uh, Pacific Ocean. Uh, we're in that period now. That affects cloud cover and it affects temperatures and it has a cascading effect around the world because it's all one great big, uh, atmospheric system.

Uh, other times it oscillates in the opposite direction and it's warmer on the western side. In Indonesia and the Philippines and like that. And you get the opposite effect. And [00:46:00] it's irregular but it happens a lot. There are a number of different fluctuations like that, so.

Tom: Uh, do you agree that Earth's climate is so complex that probably nobody understands what caused all the fluctuations over the last even

2000 years,

Harold: we have this warming trend that's been going on for 000 years and, you know, it's reasonable to expect that it's not, it hasn't ended today. So in that sense, you can make a prediction that it'll get somewhat warmer, but So could an intelligent chimpanzee, if you teach to draw a line, you know.

Speaking more largely, another person you've had on, Judith Gurry, who can explain it better than I can, but, because she's, she had a career in climate science. You know, we're talking about not one, but two [00:47:00] dynamic, systems, the atmosphere and the oceans that interact with each other in ways that we don't understand or understand only a very little bit.

And they're stochastic, which is a 5 word meaning that, uh, it's affected by, uh, by variables or unknowns that we don't, uh, that we don't have values for, which means, uh, there's a roll of the dice involved. And. That's certainly the case, uh, some of the hottest temperatures in the United States were recorded in the 1930s during the famous Dust Bowl era, you know, and, uh, here we are in the 2020s, and we haven't, uh, we haven't, uh, scaled that peak yet, and that's [00:48:00] over and above whatever effect, uh, carbon dioxide and methane are having, so, yeah, yeah, well, you're rolling the dice.

By the way, methane, You know, some people, you knock down carbon dioxide and you'll have some people who'll say, Oh, but methane, cow farts, and you know, well, you know, it turns out that methane, well, methane is a much more powerful greenhouse gas than carbon dioxide. Well, that's true within the range that methane absorbs infrared, which is much narrower than they, than the one for carbon dioxide.

More than that. It's in a part of the infrared spectrum where radiation from the earth is, is much smaller than this. Uh, the area, the carbon dioxide [00:49:00] is end result methane might contribute, contribute maybe 1%. Oh, and by the way. It has a much shorter half life in the atmosphere because it's a more active, uh, uh, chemical compound.

So, maybe 1%. It's trivial, and it always will be, and an awful lot of the methane is from natural sources, including the ocean, that we don't understand.

Tom: So do you think we're going to get to 2030 or 2040 in the world, uh, the weather's not going to be any better or worse and the disaster never comes? Do you think the hey ho's of the world are going to say, hey, you're welcome.

It was the stuff that we did. There would have been an apocalypse, but that stuff we did saved you. I think we might hear some of that.



Harold: I'm inclined to think that too. Because, you know, we were talking about the logarithmic curve before, you know, projected [00:50:00] forward, and it's held up quite well from 1870 to until now.

And if you project that forward, yeah, you'd get to just under. One and a half degrees centigrade warming from the base period, if you're on that curve, and you know, if you do all these draconian things that they suggest. Uh, freeze and starve in the dark, medieval squalor while eating bugs. It might be, um, immeasurably hairless than that.

In any case, they can say, Hey, look, we saved the planet. Well, no, I don't think they'd save . There's a lot of that going on. I suspect [00:51:00] that. Now, I'm not going to make any accusations because I try to keep, uh, stick to known facts and, you know, uh, the people who, uh, who are promoting this, uh, I'm sorry to say, don't confide in me.

So, so. I can't really speak with authority to their motivations. That's the kind of thing where if you're a journalist, you have to develop sources. You need to get somebody inside who will talk to you on or off the record. You need to get whistleblowers. You need to get documentation. Unfortunately, that's beyond my reach at this point.

So I'm, I'm not going to speak to their motivations. I'm just going to point out that it would, it looks like it would work out that way. And, uh, people can decide [00:52:00] for themselves. . I would definitely, uh, like to encourage people to, uh, look at the, uh, the facts that are assembled and, uh, the, uh, uh, some of the, uh, uh, some citations, uh, authoritative ones, uh, uh, behind it so they can see that I'm not just making it up, uh, and, you know, you can't cover it in an hour, you know, so if they could, you Please, uh, log onto h Seker, H-S-E-N-E-K-E-R, do blog spot.com.

You know, they can see for themselves what I've come up with. Um, I don't make any money on it, know I turned down the option of, uh, placing ads against it because I don't want my judgment affected.

Tom: Thank you for all the work. I'm glad you're pushing back on your blog and on the ft.

So, [00:53:00] uh, keep it up. Appreciate it.

Harold: Thank you. And you please keep up what you're doing too.

Tom: All right. Thank you very much. Talk to you next time. Harold Senecker. Goodbye.