

COMMENT

GLOBAL WARMING



GWYNNE DYER

The non-linear climate crisis

Sudden temperature jumps can't be pinned on El Niño

If you spend a lot of time talking to scientists about climate change, there's one word you'll hear time and time again, and yet it's hardly ever mentioned in the public discussion of climate change. The word is "non-linear."

Most people think of global warming as an incremental thing. It may be inexorable, but it's also predictable. Alas, most people are wrong. The climate is a very complex system, and complex systems can change in non-linear ways.

In other words, you cannot count on the average global temperature rising steadily but slowly as we pump more and more greenhouse gases into the atmosphere. It may do that — but there may also be a sudden jump in the average global temperature that lands you in a world of hurt. That may be happening now.

"We are moving into uncharted territory with frightening speed," said Michel Jarraud, secretary-general of the World Meteorological Organization, last November. He was referring to the fact that the warming is now accelerating in an unprecedented way.

The year 2014 was the hottest — until 2015 beat it by a wide margin. This year, 2016, may beat that record by an even wider margin. It was the hottest January ever — and then the average global temperature in February was a full fifth of a degree Celsius higher than January.

That was a huge jump, since the "average global temperature" is an average of all the temperatures over the seas and the land in both the summer hemisphere and the winter hemisphere. It is normally a very stable figure, changing no more than a few hundredths of a degree from year to year.

But March was not only hotter than February. It was hotter by an even wider margin than February was over January. Indeed, each of the past 11 months has beaten the highest previously recorded average temperature for that month.

Some people try to explain this all away by blaming it on El Niño, a periodical rise in the ocean surface temperature in the eastern Pacific that moves the rainfall patterns around worldwide, causing droughts here and floods there. But El Niño is a local rise in temperature; it does not normally affect the average global temperature much.

As for the frightening acceleration in the warming in the past three months, that has no precedent in any El Niño year, or indeed in any previous year. It could be some random short-term fluctuation in average global temperature, but coming on top of the record warming of 2014 and 2015 it feels a lot more like part of a trend.

Could this be non-linear change, an abrupt and irreversible change in the climate? Yes. And if it is, how far will it go before it stabilizes again at some higher average global temperature? Nobody knows.

Last year the average global temperature reached one full degree Celsius higher than the pre-industrial average. That is halfway to the plus-two degree level which all the world's governments have agreed we must never exceed, but at least we got to plus-one slowly, over a period of two centuries.

The plus-two threshold matters because at that point the warming we have already caused will trigger natural feedbacks that we cannot control: the loss of the Arctic sea ice, the melting of the permafrost, and immense releases of carbon dioxide from the warming oceans. After plus-two, we will no longer be able to stop the warming by ending our own greenhouse gas emissions.

Even at the global climate summit in Paris last December, there was still hope that we might avoid triggering the feedbacks, because the historic rate of warming would still give us about 25 years to work on cutting our emissions before we reach plus-two. But if the current non-linear surge in warming persists, we could have covered half the remaining distance and reached plus-1.5 degrees by the end of this year.

I'm not a scientist, but to years ago I interviewed almost all the world's leading climate scientists for a book I was writing. I learned that all our calculations for dealing with climate change could suddenly be swept aside by a non-linear event — and this could be it.

Gwynne Dyer is an independent journalist whose articles are published in 45 countries.

'TIS THE SEASON

Death, taxes and legumes

File your paperwork on time and boost your fibre intake if you want to live another year



PAUL BENEDETTI

If you're anything like me, well, God help you.

No, what I mean is, if you're like a lot of people, you may have just woken up in a cold sweat realizing that it is income tax time and the deadline is fast approaching.

Lucky for you, in our house this year, we've had what my wife likes to call "The Easter Miracle."

I have to admit that this "miracle" unlike other miracles such as the NDP winning in Alberta and Donald Trump actually finishing a sentence, doesn't just happen. It usually follows a list of pre-miracle events including:

1. Several weeks of "gentle prodding" from my wife which includes leaving the tax forms on my pillow at night along with newspaper clippings of people in jail for tax evasion;

2. A series of increasingly threatening

It turns out that one of the best things you can do is to eat your tax forms. Just kidding. Adding more pinto beans to your meals really works ...

notes on the fridge every morning such as "Death and Taxes: Pick one".

3. Finally, a typed letter taped to my computer which read (in part, the other parts are not suitable for a family newspaper): "If by tomorrow, I don't see a neatly stacked pile of filled-out forms on the dining room table, I will find you and force you to come to hot yoga classes with. Namaste, Your Loving Wife."

So, I sat down about a week ago and pretended to carefully go through my receipts while actually reading quite an interesting article on how to get more fibre into your diet. It turns out that one of the best things you can do is to eat your tax forms. Just kidding. Adding more pinto beans to your meals really works, but the dietitian warned that you can't increase your bean intake too fast or, under certain conditions, you can "explode."

Luckily, this has not happened to me, but I had a near miss recently after a takeout lunch from Burrito Boys and two draft beers.

Anyway, after carefully taking as much as 15 minutes to look over my financial statements, I feel well-positioned to answer any questions you may have about your taxes and about your legume intake — whichever seems more pressing.

Q: What is the marginal tax rate?

A: That is rate of taxes Canadians pay on margarine. It was instituted by the dairy farmers to protect butter sales. No, seriously, it's the rate you pay on your income as it rises. Let me explain. For example, if you make between \$50,000 and \$200,000, you should give some money to me.

Q: Can you explain the tax-free savings account, or TFSA?

A: Yes, this allows you to put as much as \$5,500 dollars into an account tax-free. For

example, if you have maxed out your RRSP for this year and you still have even more money for savings, you should give that money to me.

Q: I understand I can claim Depends on my taxes?

A: That's Dependents. A dependent is someone who lives in your house, makes no money and expects you to pay for everything. They are also known as "teenagers." For a married couple of with three children, like us, the total exemption deduction is \$20,000 or in our case, the cost of cellphones for the darlings and my daughters' "hair expenses."

Q: What about garbanzo beans?

A: Yes, they are an excellent source of fibre and the main ingredient in hummus. They are delicious, but not tax deductible.

Q: What's all this stuff about the Panama Papers?

A: They are secret documents that reveal how the wealthy set up shell companies abroad to avoid paying billions of dollars in taxes. It's estimated that Canada loses more than \$6 billion a year to offshore tax havens.

Q: Why haven't Revenue Canada agents caught them?

A: Mostly because they were too busy auditing your \$12 lunch receipts to make sure everything was on the "up and up."

Q: Can I use the same tricks as the super-wealthy to avoid paying my taxes?

A: I tried that, but I misunderstood the concept and set up a shell company in the Caribbean that actually sold shells.

My financial advice is simple: everyone should file their nails, file their taxes and eat more legumes.

Paul Benedetti lives in Hamilton where he happily pays his taxes.

COMINGS AND GOINGS

At a crossing point at Brussels airport

Reflections on travelling through life during a stop at an airport bombed by terrorists



THOMAS FROESE

BRUSSELS-ZAVENTUM AIRPORT — Once upon a time (otherwise known as "the old days," if people would watch news on their old televisions, or listen on their old radios, or pick up old newspapers that even landed on their front porches (remember front porches?)) with a thud.

They'd learn of crime and passion and war and natural disasters and children starving in Africa and jackpot wins and bankruptcies and more, bleary-eyed by the millions. They'd even talk with the neighbours and wonder if any of it, besides the weather report or the ads for the latest sandwich bread, had any meaning for their own lives. Often enough, it did not.

Now there's the new news, still consumed bleary-eyed by the millions but now carried in your pocket. The headlines are of your new haircut or your new love or your new anything that you hope might interest at least someone, head-in-screen, even while you fear that, in fact, nobody cares in the least.

Even the experts don't know exactly where the old news or the new news will end up. I personally try not to make too big a deal of either. My own experience is rooted in the one, but I see at least some value in the other: after all, we each have just one life to live and wouldn't it be a shame to go through it all without recording anything?

I'm ruminating on it while in transit through Brussels, at the airport, yes, that Brussels airport, where 32 people were recently killed by terrorists, which, in deference to the old news and the old way of presenting it, you likely know all about.

In deference to the new, you might be interested to know that, outside, the sun is rising over a tarmac strewn with passenger jets. Inside, the lineups to get your Belgian chocolate or specialty coffee (order it in Dutch, Flemish, French, German or English) are remarkably short.

This is because this airport, barely re-



Blown-out windows at the airport in Brussels on March 23. Scores were killed and injured in bombings at the airport and a subway station.

opened, is running at only quarter capacity. There's a young couple nearby, him with feet up, her with head back. Other people are also lying around, barefooted if not blanket-draped in one fashion or another over the cushions of this atrium lounge.

Otherwise, much of this airport feels cavernous. The few faces behind the trolleys and counters are what you'd find in any crossing-point that's so cosmopolitan; outside the airport more than half of Belgian's residents have roots elsewhere.

Some military police with German Shepherd herds have strolled by.

Notwithstanding, maybe, the dogs, this is some of the nothing news what you might find at any airport, people arriving from one place and going to another. Some are thrilled, others are jet-lagged and discombobulated, while others surely carry some fear.

Which is to say that however you define the news, you can go through any old airport one day and (by very small chance) be killed by some terrorist bomb. Or you can go through the same airport on another day (by far, most other days) and still be reminded of the same thing, that life — whatever large or mundane things may be unfolding in yours

— is precious, if not short.

Yes, even in our most inconsequential moments, we're each living even as we're each dying. It's only a question of degree and speed.

Not only this, but we each have our own stories, that is our own crimes and passions and wars and disasters and hungry children and jackpot wins and bankruptcies and more. In this we're each part of a larger story — His Story — some would say. And in this, strangely enough, we each also are a living, walking story, ourselves.

It seems to me, then, that any media (old, new or middle-aged with a spread) that helps us arrive at these realizations is media that is worth at least something.

Yes, once upon a time there was the news. It got old. Then the young, hipster news showed up. That's all interesting enough.

But once upon a time, also, there was you. And me. We were travellers, here one moment, a memory the next.

Some days we had the good fortune to sit at a crossing point to think more about it.

Thomas Froese writes about news, travel and life. Read him at www.thomasfroese.com and www.dailydad.net

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