

The Threshold

Leaving Our Precedented World



by

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“To unpath’d waters, undream’d shores”

– The Winter’s Tale

“If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that.”

– James Hansen, et al, *“Target Atmospheric CO₂: Where Should Humanity Aim?”*
The Open Atmospheric Science Journal, 2008.

“The world passes 400 ppm carbon dioxide threshold. Permanently.”

– *Guardian* headline, Sep. 28th, 2016.

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Threshold:

- (1) the sill of a doorway; the entrance to a house or building;
 - (2) the point at which a psychological or physiological effect begins to be produced; the starting point of an adventure or experience;
 - (3) the maximum point or upper limit at which a state or condition transitions into another state, usually permanently.
- *Webster's New Collegiate Dictionary*

Prologue

The Heat Wave

412.01

2019

This is a story about transition.

It begins on July 25th, 2019, when I thought there was something wrong with the air conditioning. Gen and I had settled into our seats in a warm compartment on a train bound for Prague from Berlin. It was early afternoon on a hot day in a hot week, so I passed my hand hopefully across an air vent along the base of the large window. Something leaked out. Air, it seemed. Soon there were six of us in the cramped space, adding our body heat to the stuffy conditions. When would the air conditioning kick in, I wondered? I had never travelled by train in Europe during high summer, so I wasn't hip to protocols for cooling down passengers. Maybe the train needed to be moving? Shortly after leaving the station, I ran my hand over the vent again, testing the feeble flow. Nothing had changed. A half hour later I tried again. The same. Maybe it was a mechanical problem? In Berlin, I felt a twinge of concern when our train pulled up. It looked old. To save a few Euros, I had booked us in second class on a commuter run back to Prague where we had started our sojourn nine days earlier. The train seemed to be fine, however, and not much different than the one that carried us to Berlin – a trip that hadn't caused any discomfort. Maybe it was just a cultural thing. As an American, I'm accustomed to air conditioning nearly everywhere I go. In Europe there seemed to be a different attitude toward the convenience as we discovered in Berlin where nearly all the buildings we visited lacked cooling air. I understood why. Europe is temperate in the summer and I suspect Germans are keen to keep their energy use as low as possible.

Still, something seemed wrong. An hour into our train ride, I was sweating – a lot. There was no way to open the window and the feeble air flow hadn't changed, except to die briefly when we pulled into a station. Soon, the compartment became a sauna. I glanced at our fellow travelers. The middle-aged man wearing European-styled glasses seated next to Gen seemed unperturbed by the conditions. The other passengers were three cheerful young adults from Ireland. They had disappeared into their smart phones as soon as we left Berlin, though occasionally they spoke short sentences to one another. They also seemed unfazed. The heat continued to build. Gen fanned herself with a map. I wiped my face on a sleeve as I watched lush

farm country roll past under a cloudless sky. Was I just being a wimp in middle age? It had been a while since Gen and I had done any real traveling, preferring to stay close to home. Maybe I had gone soft as a consequence. I passed my hand in front of the air vent again. Still feeble. Puzzled, I returned my gaze to the pretty farmland beyond the window. Then I heard two words that changed everything.

“Heat wave,” one of the Irish lads announced, looking up from his phone.

And not just any heat wave – a record-smashing one. In Paris, the thermometer hit 108.7° F (42.6° C) demolishing a record that stood since 1947 by an astonishing four degrees. Germany set an all-time national record of 108° surpassing the previous mark by nearly four degrees – a mark set just one day earlier. It was a similar story in Belgium and the Netherlands, where all-time highs were surpassed by six and five degrees respectively. According to the Royal Netherlands Meteorological Institute, temperatures had never risen above 104 degrees in recorded history. The national weather service in England reported a reading of 101.7° at Cambridge University, breaking the previous record of 101.3° set in 2003 and marking only the second time temperatures had reached triple digits in the United Kingdom. No wonder our train compartment became a sauna! I could certainly sympathize with a BBC story we heard later about a Eurostar train in Belgium that had broken down in the heat. Passengers were not allowed to open windows or leave the train for three hours out of safety concerns. A person was quoted saying “I have never been so hot in my life.”

The real news, however, wasn't how many records had been broken but by how much they had been surpassed. All-time temperature records are set incrementally, often by only a few tenths of a degree. But the records that fell on July 25th were obliterated. Something like this had never happened before in modern history.ⁱ

To be Continued...

ⁱ <https://www.cnn.com/2019/07/25/europe/europe-heat-wave-records-intl/index.html>