The Week That Was: 2021-09-18 (September 18, 2021) Brought to You by SEPP (www.SEPP.org) The Science and Environmental Policy Project

Quote of the Week: "skepticism is the highest of duties; blind faith the one unpardonable sin" – Thomas Huxley [H/t Jim Steele]

Number of the Week: – 68.3%

THIS WEEK:

By Ken Haapala, President, Science and Environmental Policy Project (SEPP)

Scope: For the past several weeks TWTW has been reviewing some of the deficiencies in the Sixth Assessment Report (AR6, 2021) by the UN Intergovernmental Panel on Climate Change (IPCC), particularly its Summary for Policymakers (SPM) which includes a new hockey-stick with little evidence supporting it. Comments by statistician Steve McIntyre are devastating. He traced that the assertions that temperatures have been stable up to the industrial revolution come from a set of studies by an international paleoclimatology group based in Bern, Switzerland, known as PAGES 2k (**PA**st Global Chang**ES** with **2k** referring to the past 2000 years). The data are maintained by NOAA in Boulder. The most devastating criticism is the deliberate omission of high-resolution, well-established proxy studies of alkenone deposits (produced by marine algae). These deposits include those in limestone beds, and date back millions of years.

Seeking the 2000-year Hockey-stick: As discussed in the September 4 TWTW, the "Summary for Policymakers" of the *Physical Science Basis* of Sixth Assessment Report (AR6) by the UN's Intergovernmental Panel on Climate Change (IPCC) is used to justify drastic changes in the use of fossil fuels. Given the magnitude of such changes, the document should be of the highest scientific standards and demonstrate the scientific integrity of the IPCC. Stephen McIntyre examines the extent of data, or lack thereof, covering the region of the Southern Hemisphere from 0° to 30° South Latitude. Put bluntly, there are no significant archived data supporting a hockey-stick shape for temperature trends over the past 2000 years. Indeed:

"Only four PAGES2019 series in the 0-60S latband [latitude band] start prior to AD1100 and none of them have a HS [hockey-stick] shape."

Thus, McIntyre has not been able to find archived data supporting the IPCC claim of a hockeystick. This week, McIntyre covered the surface of the Northern Hemisphere from the equator (0°) to 30° North Latitude. Thus, he has covered the entire tropical region that is often described as 30° North to 30° South Latitude. McIntyre writes:

"Next, the PAGES2019 0-30N latband. Their CPS reconstruction (CPS) for the 0-30N latband (extracted from the global reconstruction) looks almost exactly the same as reconstructions for

the 0-30S and 30-60S latbands. However, none of the actual proxies in this latband look remotely like the latband reconstruction, as I'll show below. In the course of examining the proxies in this latband, I looked back at 0-30N latband in prior PAGES compilations (2013 and 2017) and Mann et al 2008. The evolution of the proxy network is quite fascinating: the most notable feature is the increasing dominance of short (1-200 year) coral series in a network supposedly reconstructing the past 2000 years."

From a paper written by Mr. Mann et al. published in 2008, CPS means a composite plus scale methodology:

"Most attempts to reconstruct hemispheric temperatures have used some variant on the "composite plus scale" (CPS) methodology (10), in which proxy data (such as tree rings, ice cores, or corals) considered to be sensitive to past surface temperature variations are standardized and centered, potentially weighted, and then composited to form a regional or hemispheric series. The resulting series is then regressed or simply scaled against the target instrumental series (e.g., the Northern Hemisphere mean annual temperature series) to yield a reconstruction of hemispheric or global mean temperature." [(10) is a reference to a 2004 paper by Jones and Mann "Climate over past millennia."

After presenting the new hockey-stick from the PAGES2019 reconstruction for the tropics in the Northern Hemisphere, McIntyre writes:

The primary purpose of "2000 year" proxy reconstructions of temperature is to compare modern temperature to estimates of medieval and first millennium temperatures. There are 41 proxies in the 0-30N network, but only three proxies with values before AD1200 and **only one** (!?!) proxy with values prior to AD925 (see diagram below). [Boldface in original]

The single long proxy with values through the first millennium is a temperature reconstruction from Mg/Ca values from an ocean core offshore northern Africa. Its values decline erratically through the past two millenia, with very minor recovery in 20th century. If this is the ONLY data for the 0-30N latband through most of the first millennium, how can PAGES2K say with any confidence that modern values are higher than first millennium values? They can't. My guess is that their algorithm(s) somehow paste 20th century trends in coral d180 [containing heavy isotopes of oxygen and hydrogen] onto non-descript or declining long proxies, but that is, at present, just a surmise. All one can say for sure is that, based on the PAGES2019 0-30N proxy network, it's impossible to assert that modern temperatures in this latband exceed first millennium values (or vice versa.)

The only proxy dating prior to AD925 shows a rough decline since about the year AD200. McIntyre goes on to speculate how one could possibly come to the assertions reached by PAGES2k and by the new hockey-stick appearing in the Summary for Policymakers in AR6. McIntyre then concludes:

"A major reason for looking at the underlying data in proxy reconstructions, aside from being sound statistical practice in general, is that, (1) by definition, a temperature proxy is supposed to be linearly related to temperature; and therefore (2) proxies in a network of actual temperature proxies, according to the definition, should (a) have a reasonably consistent appearance; and (b) look like the reconstruction. This obviously doesn't occur in the PAGES2019 0-20N network.

"Secondly, proxies covering the medieval period and earlier are disturbingly sparse in the PAGES2019 0-30N network. Although such series have become much more widely available in the past 15 years or so, PAGES 2019 0-30N contains only one (!) proxy with values prior to AD925. Indeed, it actually reduced the representation of longer (ocean core, speleothem, lake sediment) proxies from Mann et al 2008 and PAGES2017, while dramatically increasing the proportional representation of very short coral proxies. Madness.

"Finally, the network is wildly inhomogeneous over time. In the past two centuries, it is dominated by trending coral proxies, with only a few nondescript or declining long proxies. Any form of regression (or like multivariate method) of trending temperatures against a large network in the instrumental period will yield an almost perfectly fitting reconstruction in the calibration period if the network is large enough. But when the network is limited to the few long proxies (and especially the singleton proxy extending to the first century), the fit of the regression (or multivariate method) will be very poor and the predictive value of any reconstruction negligible. [Boldface added]

"Briffa rightly sneered at Mann's hyperventilating claims in respect to the few uninformative tropical (0-30N) proxies in the Mann et al 1998-99 network. The same criticism applies to the PAGES 2019 0-30N network."

See links under Challenging the Orthodoxy, Defending the Orthodoxy, and https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2527990/#B10

Claims Are Not Physical Evidence: As McIntyre has shown, the new hockey-stick featured in the IPCC Summary for Policymakers of AR6 has no predictive value. McIntyre has covered the critical tropics where significant warming is claimed to take place, and 30° to 60° South Latitude, which is about 96% ocean. This is where Jim Hansen, during the previous pause, claimed global warming was hiding. Yet the UN and its followers are implementing a full propaganda campaign to frighten the public.

The Straits Times reports:

"A failure to slash global emissions is setting the world on a 'catastrophic' path to 2.7 degrees Celsius heating, UN chief Antonio Guterres warned on Friday (Sept 17) just weeks before crunch climate talks.

"His comments come as a United Nations report on global emissions pledges found instead of the reductions needed to avoid the worst effects of climate change, they would see 'a considerable increase'.

"This shows 'the world is on a catastrophic pathway to 2.7-degrees of heating,' Guterres said in a statement."

The FAO (Food and Agriculture Organization of the UN), FIAD (Sustainable Investment Fund), UNICEF (the United Nations Children's Fund), WFP (World Food Program), and WHO (World Health Organization) issued a report claiming the world must transform "food systems for food security, improved nutrition and affordable healthy diets for all." The World Bank has warned that climate change could cause migration of 216 million people. According to reports, UN Secretary General Antonio Guterres has demanded action on dangerous climate change:

"Guterres has laid out three climate priorities. First, the UN is asking countries to strengthen their commitments to reach net zero emissions by 2050 under the 2015 Paris agreement.

"Second, it wants developed countries to fulfill a promise to raise a \$100-billion climate action fund.

"Third, it wants a 'significant breakthrough' on financing for adaptation projects for hard-hit nations, to protect them against events such as droughts, floods and sea-level rise. The UN wants adaptation finance to account for 50 percent of all climate finance."

Yet according to a 2019 report by Our World in Data, we are not living in a climate emergency but, prior to COVID, the most prosperous time in world history. In 1990 about 1.9 billion (36% of the world's population) were living in extreme poverty, in 2015 730 million (9.9% of the world's population) were. Most of the collapse in extreme poverty occurred in the Far East with heavy growth in use of fossil fuels. This use of fossil fuels has benefited vegetation around the earth with a global greening, often mistaken as a warming.

The false claims by the UN and its followers prompt the question: What planet are they on? Unless the UN and its followers can produce compelling physical evidence of dangerous global warming, China, India, and other countries in the Far East will continue to smile politely and ignore the fools from the West. See links under Defending the Orthodoxy, After Paris! Communicating Better to the Public – Make things up, Return of King Coal? and https://ourworldindata.org/extreme-poverty

Pogo-Stick Power: Nature played one of her tricks again, she shut off wind turbines in Britain leading to skyrocketing electricity prices. Since weather systems can extend some 1500 miles (2500 km) nature can cut-off weather dependent power over wide areas. Those who advocate green energy fail to realize how fragile it is. After presenting a standard article by reporter Matthew Lynn, Paul Homewood states some realistic suggestions:

"Matthew Lynn is wrong on one point, when he says:

"'We need to recognise that while transitioning to green energy may be fine in the medium-term, we are going to need lots of back-up while that happens'

"In reality the more renewable power that gets added, the less reliable the system will become and the more back up will be necessary.

"And it's not clear where he thinks this new back up will miraculously appear from. At the very minimum, he should be demanding:

- An immediate suspension of coal power plant closures, if necessary aided by subsidies.
- An immediate suspension till further notice of CfD [the Contracts for Difference] auctions. If wind farm operators want to build new farms, let them do so without guaranteed subsidies
- A 'intermittency surcharge' to be imposed on wind and solar power, so that they pay the cost of providing standby power

- A rule insisting that all new wind and solar plants include sufficient storage to supply nameplate capacity for, say, one week
- Abolition of carbon pricing, which has distorted market mechanisms, and is largely responsible in Europe for the massive rise in energy prices this year.
- Immediate suspension of moves to electric cars and heat pumps
- Abandoning strategic plans which rely heavily on imported power, and replacement with plans which prioritise the provision of sufficient, reliable home-grown power.

"These problems have been building up for years. Mr Lynn's fiddling around at the edges will make little difference."

TWTW would add that simply because government has instituted a policy does not mean that it has engaged in critical thinking.

In another article on the National Grid, UK's electricity transmission network which transfers energy between Great Britain and Ireland, France, the Netherlands, Belgium, and Norway, Homewood writes:

"The National Grid's Future Energy Scenarios are based around up to 25 GW of interconnector capacity, which amounts to playing Russian Roulette with our energy security. As we have seen this month, when we are short of wind power, the rest of Northern Europe tends to be as well.

"What guarantees are there then that France, say, will allow its power to be exported when they themselves are short of it. Indeed, last week Ireland shut down the Moyle interconnector to Britain, built to export surplus Irish wind power. The reason? They too were short of electricity!

"To cap it all, a fire has just taken out the 2 GW interconnector between Britain and France, and it is expected to be out of action till next March.

"Russian Roulette with a fully loaded pistol might be a better description!"

After reviewing the erratic power generation from wind as reported by the Bonneville Power Administration, TWTW adds that 100% back-up or storage for a week is not sufficient for wind power. A proof of concept would require that the back-up or storage can be replenished in a timely fashion. See links under Challenging the Orthodoxy, Questioning European Green, Pogostick Power, Europe, Challenging and European Green, Energy Issues – Non-US, Energy Issues – Non-US, and Energy Issues – US and Article # 1.

Use Hot Water To Make Ice? In addressing the notion that warming of the Arctic caused the Blue Norther to freeze parts of Texas last February, Patrick Michaels mentions the country myth that one can make ice cubes faster by using hot water than by using cold water. [According to an article in the American Journal of Physics years ago, this may work on ice forming in wooden water buckets with equal amounts of water when placed outside. Particularly if the air is dry, rapid evaporation of hot water reduces the amount of water to be frozen and the wood insulates both the hot and cold water.] See links under Defending the Orthodoxy – Bandwagon Science.

Wait Until Next Year! In the Northern Hemisphere, the Fall Solstice will occur this week and the Arctic ice has not yet melted. Further, polar bears are still around. So, we must wait until next

year for the predicted melting of the Arctic sea ice and the demise of the polar bear. See links under Changing Cryosphere – Land / Sea Ice

14th **ICCC**: The 14th International Conference on Climate Change presented by The Heartland Institute will be October 15 to 17, 2021, at Caesars Palace in Las Vegas. See https://climateconference.heartland.org/

Number of the Week: 68.3%. The area from 30° North Latitude to 30° South Latitude covers 50% of the earth's surface, and the area from 30° South to 60° South Latitude covers 18.3% of the earth's surface. In his analysis of data pertaining to PAGES2k, Steve McIntyre has covered 68.3% of the earth's surface and found no 2000-year hockey-stick. The Summary for Policymakers of AR6 belongs in the same circular file as the Second Assessment Report, 1995, with its fabled "hot spot" over the tropics and the Third Assessment Report, 2001, with its fabled "hockey-stick." See link under Challenging the Orthodoxy and https://tasks.illustrativemathematics.org/content-standards/tasks/1114

NEWS YOU CAN USE:

Censorship

Facebook Says Its Rules Apply to All. Company Documents Reveal a Secret Elite That's Exempt.

A program known as XCheck has given millions of celebrities, politicians and other high-profile users special treatment, a privilege many abuse

By Jeff Horwitz, WSJ, Sep 13, 2021

https://www.wsj.com/articles/facebook-files-xcheck-zuckerberg-elite-rules-11631541353?mod=hp_lead_pos7

Challenging the Orthodoxy -- NIPCC

Climate Change Reconsidered II: Physical Science

Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2013

https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf

 ${\it Summary: \underline{https://www.heartland.org/_template-assets/documents/\overline{CCR/CCR-II/Summary-for-Policymakers.pdf}}$

Climate Change Reconsidered II: Biological Impacts

Idso, Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2014

http://climatechangereconsidered.org/climate-change-reconsidered-ii-biological-impacts/ *Summary*: https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf

Climate Change Reconsidered II: Fossil Fuels

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, April 2019

http://store.heartland.org/shop/ccr-ii-fossil-fuels/

Download with no charge:

http://climatechangereconsidered.org/wp-content/uploads/2019/01/Climate-Change-

Reconsidered-II-Fossil-Fuels-FULL-Volume-with-covers.pdf

Why Scientists Disagree About Global Warming

The NIPCC Report on the Scientific Consensus

By Craig D. Idso, Robert M. Carter, and S. Fred Singer, Nongovernmental International Panel on Climate Change (NIPCC), Nov 23, 2015

http://climatechangereconsidered.org/

Download with no charge:

https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008

http://www.sepp.org/publications/nipcc final.pdf

Global Sea-Level Rise: An Evaluation of the Data

By Craig D. Idso, David Legates, and S. Fred Singer, Heartland Policy Brief, May 20, 2019 https://www.heartland.org/_template-assets/documents/publications/SeaLevelRiseCCRII.pdf

Challenging the Orthodoxy

PAGES 2019: 0-30N Proxies

By Stephen McIntyre, Climate Audit, Sep 15, 2021

https://climateaudit.org/2021/09/15/pages-2019-0-30n-proxies/

Energy prices in Europe hit records after the wind stops blowing

By Staff, WSJ, Via GWPF, Sep 14, 2021

https://www.thegwpf.com/energy-prices-in-europe-hit-records-after-the-wind-stops-blowing/

We cannot afford to stop and start society depending on whether or not the wind may blow

By Rob Lyons, RT, Sep 16, 2021 [H/t Bernie Kepshire]

https://www.rt.com/op-ed/535021-eu-dependence-renewables-wind-solar-power/

[SEPP Comment: By publishing the article, Russian State-owned RIA Novosti news agency displays more critical thinking about electricity than the New York Times has displayed in years.]

Upsetting the apple cart IX: Koonin on Plan(s) B

By John Robson, Climate Discussion Nexus, Sep 15, 2021

 $\underline{https://climatediscussionnexus.com/2021/09/15/upsetting-the-apple-cart-ix-koonin-on-plans-b/2021/09/15/u$

Continuing University of Guelph professor Ross McKitrick's look at Steven E. Koonin's landmark book Unsettled: What Climate Science Tells Us, What it Doesn't, and Why it Matters.

Uncertain Clouds

By Willis Eschenbach, WUWT, Sep 17, 2021

https://wattsupwiththat.com/2021/09/17/uncertain-clouds/

Get ready for the left's climate-change 'emergency' lockdowns

By David Harsanyi, New York Post, Sep 12, 2021

https://nypost.com/2021/09/12/get-ready-for-climate-change-emergency-lockdowns/

Still waiting for two thirds of polar bears worldwide to disappear due to lack of summer sea ice

By Susan Crockford, Polar Bear Science, Sep 15, 2021

https://polarbearscience.com/2021/09/15/still-waiting-for-two-thirds-of-polar-bears-worldwide-to-disappear-due-to-lack-of-summer-sea-ice/

Defending the Orthodoxy

IPCC, AR6, 2021: Summary for Policymakers

In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

By Masson-Delmotte, V., P, et al. Cambridge University Press. In Press.

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC AR6 WGI SPM.pdf

Link to Technical Support Document

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC AR6 WGI TS.pdf

World on 'catastrophic' path to 2.7 degrees Celsius warming: UN chief

By Staff, The Straits Times, Sep 18, 2021

 $\underline{https://www.straitstimes.com/world/countries-emissions-pledges-still-fall-short-of-global-climate-goals-un-says}$

UN calls for 'repurposing' farm subsidies harming environment

By AFP Staff Writers, Paris (AFP), Sept 14, 2021

https://www.seeddaily.com/reports/UN_calls_for_repurposing_farm_subsidies_harming_environ ment 999.html

Link to press release: The State of Food Security and Nutrition in the World 2021

Transforming food systems for food security, improved nutrition and affordable healthy diets for all

By Staff: FAO, IFAD, UNICEF, WFP and WHO, 2021

http://www.fao.org/documents/card/en/c/cb4474en

Western US faces future of prolonged drought even with stringent emissions control

By Staff Writers, Washington DC (SPX) Sep 09, 2021

https://www.terradaily.com/reports/Western_US_faces_future_of_prolonged_drought_even_with_stringent_emissions_control_999.html

Link to paper by NASA, etc: Uncertainties, Limits, and Benefits of Climate Change Mitigation for Soil Moisture Drought in Southwestern North America

By B. I. Cook, Earth's Future, 2021

https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2021EF002014

[SEPP Comment: Soil Moisture reconstructed back to the year 800?]

Defending the Orthodoxy - Bandwagon Science

Dubious climate science about the Texas cold disaster

By Patrick Michael, Climate Etc. Sep 14, 2021

https://judithcurry.com/2021/09/14/dubious-climate-science-about-the-texas-cold-disaster/

Link to highly questionable paper: Linking Arctic variability and change with extreme winter weather in the United States

By Judah Cohen, AAAS Science, Sep 3, 2021

https://www.science.org/doi/10.1126/science.abi9167

Texas Primer: The Blue Norther

Greetings from the Arctic.

By Jan Reid, Texas Monthly, November 1982

https://www.texasmonthly.com/being-texan/texas-primer-the-blue-norther/

See link immediately above

Warming Causes Cooling, Says Climate Scientist

By Jeffrey Folks, American Thinker, Sep 17, 2021

https://www.americanthinker.com/articles/2021/09/warming_causes_cooling_says_climate_scient ist.html

See above 3 links

Climate change expected to intensify summertime droughts across Europe

By Brooks Hays, Washington DC (UPI), Sep 7, 2021

https://www.terradaily.com/reports/Climate_change_expected_to_intensify_summertime_drought s across Europe 999.html

[SEPP Comment: Unless it causes flooding as claimed it did this year in Germany.]

Questioning the Orthodoxy

An Eerie Warning from Hans Morgenthau

By Francis P. Sempa, American Thinker, Sep 15, 2021

https://www.americanthinker.com/articles/2021/09/an_eerie_warning_from_hans_morgenthau.html

Latest news on cheap offshore wind

By Andrew Montford, GWPF, Sep 15, 2021

https://www.thegwpf.com/moray-east-costs/

"With a capital cost of £3.8 billion, and a prospective load factor in its first year of perhaps 47% (i.e. the same as Beatrice, the windfarm next door), we might optimistically expect Moray East to have a levelised cost of £130, which is pretty much typical of recent offshore units."

Freezing Poor People For Christmas

By Tony Heller, His Blog, Sep 16, 2021

https://realclimatescience.com/2021/09/freezing-poor-people-for-christmas/

"Fossil Fuels are a strategic asset" say people watching UK and EU perfect gas storm

By Jo Nova, Her Blog, Sep 18, 2021

 $\underline{https://joannenova.com.au/2021/09/fossil-fuels-are-a-strategic-asset-say-people-watching-uk-and-eu-perfect-gas-storm/}$

After Paris!

World leaders will hold closed-door climate meet at UN

By AFP Staff Writers, United Nations, United States (AFP), Sept 15, 2021

https://www.terradaily.com/reports/World_leaders_will_hold_closed-

door climate meet at UN 999.html

Leaders of China, India, and other major economies skip out on Biden's latest climate forum

By Christian Datoc, Washington Examiner, Sep 17, 2021

https://news.yahoo.com/leaders-china-india-other-major-145800044.html

Biden said: "There's a real consensus, a real consensus that while the climate crisis poses an existential threat, there is a silver lining the climate crisis also presents real and incredible economic opportunities to create jobs, lift up the standard of living for people around the world," he said. "We know there's still a lot of work to do, and if anything, our job, in my view, is growing more urgent."

UN climate summit at risk of failure, UN GenSec warns

By Staff, GWPF, Sep 17, 2021

https://www.thegwpf.com/un-climate-summit-at-risk-of-failure-un-gensec-warns-but-dont-worry/

Change in US Administrations

U.S. to struggle to meet Biden's power grid climate goal -Woodmac

By Timothy Gardner, Reuters, Sep 16, 2021

https://www.reuters.com/business/sustainable-business/us-struggle-meet-bidens-power-grid-climate-goal-woodmac-2021-09-16/

Link to Wood Mackenzie report failed

[SEPP Comment: The US economy met the Trump Administration's goal of energy independence.]

AP Fact Check finds Biden made exaggerated claims on jobs, gasoline

By Rachel Scully, The Hill, Sep 17, 2021

https://thehill.com/policy/energy-environment/572788-ap-fact-check-finds-biden-made-exaggerated-claims-on-jobs-gasoline

Biden: Ten Years Left For The Planet

By Tony Heller, His Blog, Sep 16, 2021

https://realclimatescience.com/2021/09/biden-ten-years-left-for-the-planet/

Biden confirms 30 percent global methane reduction goal, urges 'highest possible ambitions' By Zack Budryk, The Hill, Sep 17, 2021

https://thehill.com/policy/energy-environment/572719-biden-confirms-30-global-methane-reduction-goal-urges-highest

Problems in the Orthodoxy

Southern Hemisphere's ozone hole now bigger than Antarctica

By Olafimihan Oshin, The Hill, Sep 16, 2021

 $\underline{https://thehill.com/policy/energy-environment/572564-southern-hemispheres-ozone-hole-larger-than-normal-scientists-say}$

[SEPP Comment: The Montreal Protocol accomplished nothing?]

Can't COP

By John Robson, Climate Discussion Nexus, Sep 15, 2021 https://climatediscussionnexus.com/2021/09/15/cant-cop/

"After Britain's 'climate envoy' Alok Sharma (nice work if you can get it, including the expense account) and US 'climate envoy' John Kerry (ditto) came to China to kowtow, the government/Communist Party Global Times warned the UK that it must not 'allow Washington to hijack the summit for its ill geopolitical intentions' and added that China would 'stick to its own pace' on emissions."

AP: "UN: Climate pledges put world on 'catastrophic pathway'

By Eric Worrall, WUWT, Sep 17, 2021

https://wattsupwiththat.com/2021/09/17/ap-un-climate-pledges-put-world-on-catastrophic-pathway/

Norway to hold firm on oil, gas, energy transition under new government

By Nick Coleman, S&P Global, Sep 14, 2021

https://www.spglobal.com/platts/en/market-insights/latest-news/energy-transition/091421-norway-to-hold-firm-on-oil-gas-energy-transition-under-new-government

Seeking a Common Ground

The Malden Wildfire and Climate Change: Why are Major Media and Politicians Distorting the Truth?

If the nation and world are going to deal with climate change, it is essential that the public is given accurate information.

By Cliff Mass, Weather Blog, Sep 12, 2021

 $\underline{https://cliffmass.blogspot.com/search?updated-max=2021-09-14T00:30:00-07:00\&max-results=2\&start=2\&bv-date=false}$

Changing Weather

IPCC AR6: Tropical cyclones, unspun edition

By John Robson, Climate Discussion Nexus, Sep 15, 2021

https://climatediscussionnexus.com/2021/09/15/ipcc-ar6-tropical-cyclones-unspun-edition/

A Potential Intense Feature Moving Through Tonight. My New Podcast. And Why are Northwest Summers so Dry.

A potentially VERY intense frontal feature will move through western Washington tonight, one that could produce intense rainfall and localized urban flooding.

By Cliff Mass, Weather Blog, Sep 17, 2021

https://cliffmass.blogspot.com/2021/09/a-potential-intense-feature-moving.html

Changing Climate

New Study: High Arctic Canada's Early Holocene Winter Air Temperatures Were '6-8°C Warmer Than Today'

By Kenneth Richard, No Tricks Zone, Sep 16, 2021

https://notrickszone.com/2021/09/16/new-study-high-arctic-canadas-early-holocene-winter-air-temperatures-were-6-8c-warmer-than-today/

Link to latest paper: Holocene ice wedge formation in the Eureka Sound Lowlands, high Arctic Canada

By Kethra Campbell-Heaton, et al. Cambridge University Press, Feb 23, 2021

 $\frac{https://www.cambridge.org/core/journals/quaternary-research/article/abs/holocene-ice-wedge-formation-in-the-eureka-sound-lowlands-high-arctic-low-arctic-low$

canada/2321E4BCDD38D5B4271EAD83A73E80D4

Changing Seas

Climate ate my castle

By John Robson, Climate Discussion Nexus, Sep 15, 2021

https://climatediscussionnexus.com/2021/09/15/climate-ate-my-castle/

"The nearest tide gauge is at Portsmouth and it shows a long term increase of 1.84 mm per year, which is just over 7 inches per century, not even close to 36 inches. And the sea level rise all but

ended in 1980 with no visible trend over the past 40 years. The building on a sandbar was undermined by the removal of its beach by human action not climate change."

Changing Cryosphere – Land / Sea Ice

Arctic Ice Abounds at 2021 Minimum

By Ron Clutz, Science Matters, Sep 18, 2021

https://rclutz.com/2021/09/18/arctic-ice-abounds-at-2021-minimum/

Arctic Sea Ice: Long-term decline held back

By David Whitehouse, GWPF, Sep 17, 2021

https://www.thegwpf.com/arctic-sea-ice-long-term-decline-held-back/

Reality Jolt: Arctic September Minimum Sea Ice Extent Trend RISING Over Past 10 Years – Norwegian Data

By P Gosselin, No Tricks Zone, Sep 12, 2021

https://notrickszone.com/2021/09/12/reality-jolt-arctic-september-minimum-sea-ice-extent-trend-rising-over-past-10-years-norwegian-data/

Scientists Find "Surprising" And "Statistically Significant" Cooling Trend Over Entire Continental Antarctica

By P Gosselin, No Tricks Zone, Sep 17, 2021

https://notrickszone.com/2021/09/17/scientists-find-surprising-and-statistically-significant-cooling-trend-over-entire-continental-antarctica/

Link to paper: An Assessment of ERA5 Reanalysis for Antarctic Near-Surface Air Temperature By Jiangping Zhu, et al. Atmosphere, Feb 5, 2021 https://www.mdpi.com/2073-4433/12/2/217/htm

Changing Earth

New Study: No Trend In Compound Natural Disasters Across Australia Since 1966

By Kenneth Richard, No Tricks Zone, Sep 13, 2021

 $\frac{https://notrickszone.com/2021/09/13/no-trend-in-compound-natural-disasters-across-australia-reveal-since-1966/$

Lowering Standards

Economics By "The Economist"

By Tony Heller, His Blog, Sep 16, 2021

https://realclimatescience.com/2021/09/economics-by-the-economist/

The climate scaremongers: A weekly round-up

By Paul Homewood, The Conservative Woman, Sep 17, 2021

https://www.conservativewoman.co.uk/the-climate-scaremongers-a-weekly-round-up-6/

Communicating Better to the Public – Use Yellow (Green) Journalism?

NYT: "Do We Need to Shrink the Economy to Stop Climate Change?"

By Eric Worrall, WUWT, Sep 17, 2021

 $\underline{https://wattsupwiththat.com/2021/09/17/nyt-do-we-need-to-shrink-the-economy-to-stop-climate-change/}$

Communicating Better to the Public - Make things up.

Climate change could spark migration of 216M people: World Bank

By Monique Beals, The Hill, Sep 13, 2021

 $\underline{https://thehill.com/policy/571975\text{-}climate\text{-}change\text{-}could\text{-}affect\text{-}migration\text{-}of\text{-}millions\text{-}world\text{-}bank-}savs}$

Link to report: Groundswell Part 2: Acting on Internal Climate Migration

By Staff, World Bank Group, 2021

https://openknowledge.worldbank.org/handle/10986/36248

Speaking of math

By John Robson, Climate Discussion Nexus, Sep 15, 2021

https://climatediscussionnexus.com/2021/09/15/speaking-of-math/

"Then there's the whole issue of how often even 'peer reviewed' research is based on numbers so bad that a former editor of the British Medical Journal just declared that 'It may be time to move from assuming that research has been honestly conducted and reported to assuming it to be untrustworthy until there is some evidence to the contrary'. On the other hand, when your margin of uncertainty is a factor of nine, way bigger than your result, what does it matter if the data is also rubbish?"

BBC's Fake Climate Check On Hurricanes

By Paul Homewood, Not a Lot of People Know That, Sep 12, 2021

https://notalotofpeopleknowthat.wordpress.com/2021/09/12/bbcs-fake-climate-check-on-hurricanes/

BBC's 50C Days Rubbish

By Paul Homewood, Not a Lot of People Know That, Sep 14, 2021 https://notalotofpeopleknowthat.wordpress.com/2021/09/14/bbcs-50c-days-rubbish/

Communicating Better to the Public – Use Propaganda on Children

Editing Science Textbooks for Desired Public Opinion

By Ron Clutz, Science Matters, Sep 15, 2021

https://rclutz.com/2021/09/15/editing-science-textbooks-for-desired-public-opinion/

Questioning European Green

Europe's Fossil Fuel Shortage

By Donn Dears, Power For USA, Sep 17, 2021

https://ddears.com/2021/09/17/europes-fossil-fuel-shortage/

Europe's Net Zero agenda hits home – with eye-watering energy bills

By Sophie Mellor, Fortune, Via GWPF, Sep 11, 2021

https://www.thegwpf.com/europes-net-zero-agenda-hits-home-with-eye-watering-energy-bills/

Britain can't rely on France and Ireland to keep the lights on

By Paul Homewood, Not a Lot of People Know That, Sep 11, 2021

 $\underline{https://notalotofpeopleknowthat.wordpress.com/2021/09/11/britain-cant-rely-on-france-and-ireland-to-keep-the-lights-on/}$

"It's a pity the media did not wake up to these problems years ago, when the policies leading to the current mess were set in motion:"

Questioning Green Elsewhere

When green economics isn't

By John Robson, Climate Discussion Nexus, Sep 15, 2021

https://climatediscussionnexus.com/2021/09/15/when-green-economics-isnt/

"The Times story claimed that 'The Biden administration on Wednesday released a blueprint showing how the nation could move toward producing almost half of its electricity from the sun by 2050 — a potentially big step toward fighting climate change but one that would require vast upgrades to the electric grid.' But block that metaphor, because without details it's not a 'blueprint'. It's a fantasy."

Green Jobs

Britain is turning into the Venezuela of wind as green jobs are exported to Asia

By GWPF, and BBC, Sep 11, 2021

https://www.thegwpf.com/trade-union-slams-myth-of-green-jobs-revolution-as-wind-turbine-factory-closes-permanently/

Non-Green Jobs

Europe's Energy Crunch Is Forcing U.K. Factories to Shut Down

By Elizabeth Elkin and Isis Almeida, Bloomberg, Sep 16,

https://www.bloomberg.com/news/articles/2021-09-15/soaring-european-gas-prices-force-fertilizer-plants-to-shutter?sref=2eap69Y7

Funding Issues

GWPF gives evidence to the House of Lords inquiry into the Costs of Net Zero

Press Release, GWPF, Sep 14, 2021

 $\underline{https://www.thegwpf.com/gwpf-gives-evidence-to-the-house-of-lords-inquiry-into-the-costs-of-net-zero/}$

The Political Games Continue

Climate Chaos Is Here, Say TUC!

By Paul Homewood, Not a Lot of People Know That, Sep 13, 2021

https://notalotofpeopleknowthat.wordpress.com/2021/09/13/climate-chaos-is-here-say-tuc/

"Covid is not going to be a one-off,' the union federation's [TUC] general secretary, Frances O'Grady, will tell its annual congress later on Monday.

'Climate chaos is here already and the longer we put off getting to net zero, the more disruptive it will be,' she will add."

Litigation Issues

Wind Turbine Property Value Evidence Rejected in Aussie Court Case

By Eric Worrall, WUWT, Sep 16, 2021

 $\underline{https://wattsupwiththat.com/2021/09/16/wind-turbine-property-value-evidence-rejected-in-aussie-\underline{court-case/}}$

[SEPP Comment: Evidence is not expert opinion? On what do experts base their opinions? The judge cannot judge evidence?]

Energy Issues – Non-US

GWPF warns ministers not to draw the wrong lessons from Europe's energy crisis

Press Release, GWPF, Sep 9, 2021

[&]quot;There is no jobs revolution – it's a myth."

https://www.thegwpf.com/gwpf-warns-ministers-not-to-draw-the-wrong-lessons-from-europes-energy-crisis/

Power Markets In Crisis

By Paul Homewood, Not a Lot of People Know That, Sep 17, 2021 https://notalotofpeopleknowthat.wordpress.com/2021/09/17/power-markets-in-crisis/

Energy Issues – Australia

Renewable bandaid burns money: New transmission line alone costs as much as new advanced Coal Plant

By Jo Nova, Her Blog, Sep 13, 2021

 $\underline{https://joannenova.com.au/2021/09/renewable-bandaid-new-transmission-line-costs-nearly-as-much-as-a-new-advanced-coal-plant/$

Energy Issues -- US

Bonneville Power Administration

By Staff, BPA.Gov/transmission

BPA Balancing Authority Total Wind Generation, Near-Real-Time

https://transmission.bpa.gov/Business/Operations/Wind/twndbspt.aspx

BPA Balancing Authority Load and Total Wind, Hydro, Fossil/Biomass, and Nuclear Generation, Near-Real-Time

https://transmission.bpa.gov/Business/Operations/Wind/baltwg.aspx

Washington's Control of Energy

America's Resource Abundance

By Donn Dears, Power For USA, Sep 14, 2021

https://ddears.com/2021/09/14/americas-resource-abundance/

Oil and Natural Gas – the Future or the Past?

Los Angeles County supervisors vote to end oil, gas drilling

By Zack Budryk, The Hill, Sep 16, 2021

https://thehill.com/policy/energy-environment/572578-la-county-supervisors-vote-to-end-oil-gasdrilling

Return of King Coal?

If CO2 mattered, the UN would prefer Australian coal

By Jo Nova, Her Blog, Sep 11, 2021

 $\underline{https://joannenova.com.au/2021/09/if-co2-mattered-the-un-would-prefer-australian-coal/\#more-79436}$

[SEPP Comment: According to the EIA Graph China produces about one-half of the world's coal. According to Statista, Indonesia is the largest exporter, Australia the second largest.]

China and India send coal prices soaring amid green-energy push

Squeeze driven by short-term supply disruption and lack of long-term investment By Rurika Imahashi, Nikkei Asia, Sep 13, 2021 [H/t GWPF]

 $\underline{https://asia.nikkei.com/Spotlight/Market-Spotlight/China-and-India-send-coal-prices-soaring-\underline{amid-green-energy-push}}$

Nuclear Energy and Fears

Major policy flip from Australia: out with French diesel subs and in with "nuclear ones"!?

Next thing you know we might get **one** nuclear power plant?

By Jo Nova, Her Blog, Sep 16, 2021

https://joannenova.com.au/2021/09/major-policy-flip-from-australia-out-with-french-diesel-subs-and-in-with-nuclear-ones/

Alternative, Green ("Clean") Solar and Wind

Nature: Wind Turbine Noise Issues

By Robert Bradley Jr., Master Resource, Sep 14, 2021

https://www.masterresource.org/wind-turbine-noise-issues/wind-turbine-noise-nature-21/

Link to paper: Effects of low-frequency noise from wind turbines on heart rate variability in healthy individuals

By Chun-Hsiang Chiu, et al. Nature, Scientific Reports, Sep 8, 2021

https://www.nature.com/articles/s41598-021-97107-8

Wind Noise: A Continuing Issue (night amplification)

By Sherri Lange, Master Resource, Sep 13, 2021

https://www.masterresource.org/wind-turbine-noise-issues/wind-noise-worse-night/

"Environmentalists Against Wind Turbines" (international reporting)

By Robert Bradley Jr., Master Resource, Sep 15, 2021

https://www.masterresource.org/windpower-problems/environmentalists-against-wind-turbines-facebook/

Why Offshore Wind Faces Lawsuits

By David T. Stevenson, Real Clear Energy, Sep 15, 2021

https://www.realclearenergy.org/articles/2021/09/15/why_offshore_wind_faces_lawsuits_794583.html

Alternative, Green ("Clean") Vehicles

GM Warns Chevy Bolt Owners Not to Park Within 50ft of Anything You Care About

By Eric Worrall, WUWT, Sep 15, 2021

 $\underline{https://wattsupwiththat.com/2021/09/16/gm-warns-chevy-bolt-owners-not-to-park-within-50ft-of-anything-you-care-about/}$

E-car chargers will turn off to prevent blackouts

By Paul Homewood, Not a Lot of People Know That, Sep 13, 2021

 $\underline{https://notalotofpeopleknowthat.wordpress.com/2021/09/13/e-car-chargers-will-turn-off-to-prevent-blackouts/}$

California Dreaming

California grid limits may worsen inequitable access to solar energy: study

By Sharon Udasin, The Hill, Sep 13, 2021

https://thehill.com/policy/energy-environment/571978-california-grid-limits-may-worsen-inequitable-access-to-solar

Link to paper: Inequitable access to distributed energy resources due to grid infrastructure limits in California

By Anna M. Brockway, et al. Naure, Sep 13, 2021

https://www.nature.com/articles/s41560-021-00887-6

BELOW THE BOTTOM LINE

Climate change stopping soldiers from training, warns military's green tsar

By Paul Homewood, Not a Lot of People Know That, Sep 17, 2021

https://notalotofpeopleknowthat.wordpress.com/2021/09/17/climate-change-stopping-soldiers-from-training-warns-militarys-green-tsar/

"The military's green tsar has said climate change is stopping soldiers from exercises as it is increasingly 'too hot to train'."

[SEPP Comment: What would Churchill have said if one of the British Generals claimed that the Army could not fight Rommel in North Africa because it was too hot?]

Food for the worms

By John Robson, Climate Discussion Nexus, Sep 15, 2021 https://climatediscussionnexus.com/2021/09/15/food-for-the-worms/

The author, with a BA in Journalism from Concordia with a minor in Women's Studies, informs us that the three-century-long creep of non-native earthworms through North America is releasing deadly clouds of CO2. "Although they're usually perceived as friendly helpers in the garden, elsewhere, they can be a surprisingly destructive force." Once again, if worms can destroy the planet, it wasn't going to make it anyway.

What big ears you have

By John Robson, Climate Discussion Nexus, Sep 15, 2021

https://climatediscussionnexus.com/2021/09/15/what-big-ears-you-have/

[SEPP Comment: More on a questionable study in Cell.]

ARTICLES

1. Europe's Climate Lesson for America

As wind power flags, energy prices are soaring amid fuel shortages.

By The Editorial Board, WSJ, Sept. 14, 2021

https://www.wsj.com/articles/europe-climate-lesson-for-america-energy-prices-fuel-wind-11631655375?mod=hp_opin_pos_4#cxrecs_s

TWTW Summary: The editorial begins:

"Energy prices are soaring in Europe, and the effects are rippling across the Atlantic. Blame anticarbon policies of the kind that the Biden Administration wants to impose in the U.S.

"Electricity prices in the U.K. this week jumped to a record £354 (\$490) per megawatt hour, a 700% increase from the 2010 to 2020 average. Germany's electricity benchmark has doubled this year. Last month's 12.3% increase was the largest since 1974 and contributed to the highest inflation reading since 1993. Other economies are experiencing similar spikes.

"Europe's anti-carbon policies have created a fossil-fuel shortage. Governments have heavily subsidized renewables like wind and solar and shut down coal plants to meet their commitments under the Paris climate accord. But wind power this summer has flagged, so countries are scrambling to import more fossil fuels to power their grids.

"European natural-gas spot prices have increased five-fold in the last year. Some energy providers are burning cheaper coal, but its prices have tripled. Rising fossil-fuel consumption has caused demand and prices for carbon permits under the Continent's cap-and-trade scheme to surge, which has pushed electricity prices even higher.

"Russia has exploited the chaos by slowing gas deliveries, ostensibly to increase pressure on Germany to finish the Nord Stream 2 pipeline certification. Vladimir Putin last week took a swipe at the 'smart alecs' in the European Commission for 'market-based' pricing that increased competition in gas, including from U.S. liquefied natural gas imports.

"Mr. Putin can throw his weight around in Europe because the rest of the world also needs his gas. Drought has reduced hydropower in Asia, and manufacturers are using more energy to supply the West with more goods. Due to a gas and coal shortage, China has rationed power to its aluminum smelters and aluminum prices this week hit a 13-year high.

"The U.S. is the world's largest gas producer, but it isn't immune from turmoil in energy markets. Natural gas spot prices in the U.S. have doubled over the past year in part because producers have increased exports to Europe and Asia. Exports are up more than 40% during the first six months this year over last.

"This underscores how fossil fuels are a U.S. economic and strategic asset. The Biden Administration's plan to curtail oil, gas and coal production by regulation would empower adversaries, especially Russia, Iran and China, which are the world's three largest gas producers after the U.S."

After a discussion of increasing electricity and utility gas prices to consumers the article concludes:

"Europe is showing the folly of trying to purge CO2 from the economy. No matter how heavily subsidized, renewables can't replace fossil fuels in a modern economy. Households and businesses get stuck with higher energy bills even as CO2 emissions increase. Europe's problems are a warning to the U.S., if only Democrats would heed it."

Joe Biden's Presidency Is Incredible—No, Really

The dissembling and self-contradictions are many, but the press never sees fit to call them out as lies.

By Gerard Baker, WSJ, Sept. 13, 2021

https://www.wsj.com/articles/joe-biden-trust-approval-afghanistan-covid-19-vaccine-mandate-mainstream-media-11631548431?mod=hp opin pos 1

TWTW Summary: In a plea for clarity and balanced reporting, the columnist writes:

"Say what you will, it should be obvious by now to any fair-minded observer that Joe Biden is an incredible president. Absolutely unbelievable.

"Given what might be politely termed as recent adverse developments, this will come as a surprise to some readers, so let me clarify: I don't mean 'incredible' in the sense the word has come to be used in the modern argot of our rapidly devaluing language. Like 'awesome,' which, growing up I only ever heard used in the context of the deity but which is now typically deployed to describe a slice of pizza or a haircut, 'incredible' has been subject to significant linguistic distortion.

"It's amusing to hear some journalist of impressively wide self-esteem but evidently narrower vocabulary heap praise on a story by describing it as 'incredible'—though the phrase 'this is some incredible reporting from CNN,' which I have occasionally seen tweeted, has a satisfactorily, if unintentionally, faultless quality to it.

"So, in a probably futile bid to return English words to their actual meaning, I should make clear that what makes Joe Biden an incredible president is that you can't believe a word he says.

"Remember that vaccine that Kamala Harris said a year ago she probably wouldn't take because Donald Trump was responsible for it? Well, now she and her boss say we've all got to take it or else the federal government will have us fired from our jobs. This followed a declaration on the vaccine by Mr. Biden, shortly before taking office, that he wouldn't 'demand that it be mandatory.'

"Two months ago, we were 'closer than ever to declaring independence from the virus' but last week we were warned that defeating the virus would 'take a lot of hard work and it's going to take some time."

Now, things change, it's true. We've all had to revise and amend remarks in light of uncomfortable new facts. But this administration's capacity for self-contradiction has reached epidemic levels.

"Take that slightly menacing speech on vaccine mandates last week. Even within the span of a few minutes Mr. Biden managed a baffling inconsistency. One moment he assured us that if we were vaccinated we had an infinitesimal chance of getting sick enough to need hospitalization. But the next moment he said the unvaccinated were threatening the health of those of us who are vaccinated.

"What makes this Covid credibility problem more remarkable is that Mr. Biden evidently thought it would be helpful for his credibility to change the subject from a subject on which it had already been shredded—Afghanistan.

"You'll recall the nightly contentions from the White House podium in that last chaotic week of the U.S. withdrawal from Kabul. The allies were perfectly happy with it. No Americans would be left behind. The Taliban were going to be helpful partners.

"The president seems to have settled on a strategy of rotating monthly through a different set of falsehoods. Afghanistan in August. Covid in September. Next month: How I've succeeded in keeping immigration under control. By Thanksgiving, inflation will no doubt still be transitory.

"Now it's important to say here that the past few years haven't exactly been a golden age for presidential credibility. Mr. Biden's predecessor set the bar for authoritative misdirection extremely high.

"But you'll recall that President Trump's whoppers were, in the somber reporting of the time, cast as an existential threat to the very fabric of American democracy. News articles would report something he'd said as either an outright lie or with the censorious clarification that his words were 'false' or 'without evidence.' (I earned infamy a few years back as editor of the news pages of this newspaper for insisting that reporting something confidently as a 'lie' required a level of knowledge about a person's mind that we probably didn't have.)

"I don't see news organizations reporting that President Biden has 'falsely' stated that there had been no complaints from U.S. allies, or that he has said 'without evidence' that Covid was on the wane. Republicans lie. Democrats merely misspeak.

"His credibility problem isn't simply sapping Mr Biden's poll numbers or even his ability to advance his political agenda. It's further eroding trust in government, undermining America's tattered reputation in the world and making it immeasurably harder for authority—now and in the future—to maintain the kind of trust that is essential to the functioning of a free society.

"Among America's most important allies there is no longer any trust that Mr. Biden can be relied on as a serious partner. They're now making their own plans. At home, people are so bewildered and angry about the endless inconsistencies on masks, lockdowns and vaccines that many of them have simply stopped paying attention.

3. Notable & Quotable: Miraculous Economics

'An ordinary lead pencil is the result of the peaceful cooperation of thousands upon thousands of individuals who will never meet.'

By Roger Beam, WSJ, Sept. 16, 2021

https://www.wsj.com/articles/adam-smith-invisible-hand-american-studies-economics-11631820986?mod=hp_opin_pos_6#cxrecs_s

TWTW Summary: After receiving the 2021 Bradley Prize, the president of the Fund for American Studies states

"Taught properly, economics provides a lens to understand the way the world works. It is about how humans interact and make choices, and how an undirected market process unleashes the forces of invention, innovation, imagination, and improvement. The result is nothing short of miraculous.

"We ignite a spark in the minds of students when we show them how Adam Smith's Invisible Hand motivates a self-interested individual to 'promote an end which was no part of his intention' and thereby serve the needs of others. This seemingly simple concept explains why there was someone at your neighborhood coffee shop early this morning ready to serve you hot coffee, why a pilot spent years in training to fly you safely to Washington for this ceremony, and how something as simple as an ordinary lead pencil is the result of the peaceful cooperation of thousands upon thousands of individuals who will never meet."