**Pollution**

**Yes, meetings do spew hot air: There's now a scientific explanation for why people sometimes struggle to think on their feet in a stuffy meeting or classroom, said Veronique Greenwood in The New York Times. We know "small rooms can build up heat and carbon dioxide from our breath," but several recent studies have found that "indoor air may matter more than we have realized." Researchers discovered that a relatively normal amount of CO2 in a room can correlate to poor performance on a problem-solving test. "Higher CO2 levels, say, above 1,200 parts per million -- often indicate a low ventilation rate" -- but levels around 5,000 ppm are commonly found in school classrooms. Our improvements in sealing our buildings to reduce energy waste have only made the problem worse. One way to make things better: "It might be a generally good practice, when possible, to crack open a door." *(The Week magazine, May 17, 2019)***

**Cast your bread upon the waters and you'll probably be cited for polluting. *(Franklin P. Jones, in Quote magazine)***

**Pollution is caused by man's sootprints. *(W. V. Cunningham, in Reader's Digest)***

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**China's greenhouse gas emissions are now higher than all other developed nations' combined, according to a new analysis. In 2019 China's share rose to 27 percent of the world's total emissions -- largely due to the heavy use of coal -- compared with 11 percent for the U.S., 6.6 percent for India, and 6.4 percent for the 27 nations of the European Union. *(CNBC.com, as it appeared in The Week magazine, May 21, 2021)***

**Nearly one fifth of China's farmland has been polluted because of industrialization and lack of environmental regulations, according to a Chinese government report. More than 80 percent of the pollution involves inorganic toxins, including cadmium, nickel, and arsenic, which can make their way into crops. *(The New York Times, as it appeared in The Week magazine, May 2, 2014)***

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**Cruise ships dumped more than 1 billion gallons of sewage into the ocean in 2014, according to a new analysis of federal data by Friends of the Earth. An average cruise ship with 3,000 passengers and crew produces enough sewage to fill 10 backyard swimming pools a week. *(ThinkProgress.org, as it appeared in The Week magazine, December 19, 2014)***

**It will be a while before cars can be made totally pollution-free. For the moment that's Emission Impossible. *(Harry Turner, Register and Tribune Syndicate)***

**Greetings from "Garbage Island": Lying between New Zealand and Chile in the South Pacific, uninhabited Henderson Island boasts white sandy beaches, 57 species of flowering plant -- and 38 million pieces of plastic garbage, the highest density of trash ever recorded. Researchers made the startling discovery during a routine survey of the 14.4-square-mile coral atoll, which is so remote and inaccessible that in 1988 UNESCO declared it a World Heritage Site with a "near-pristine island ecosystem." Now Henderson is littered with 18 tons of fishing nets, toothbrushes, razors, lighters, water bottles, helmets, toy soldiers, and other refuse, the Washington Post reports. Markings suggest the debris came from China, Japan, South America, Europe, the U.S., Russia, and elsewhere around the world. Why did it end up on Henderson? The island sits on the western edge of the South Pacific gyre -- a circular ocean current that acts like a conveyer belt, dumping floating objects ashore. During a three-month stay on Henderson, the researchers found that about 3,500 pieces of plastic waste washed onto the island's beaches daily. All told, some 9 million tons of plastic ends up in oceans each year; it traps marine mammals and fish, gets swallowed by seabirds, never degrades, and can float around for decades. "When we dispose of plastic, we think it goes away," says study co-author Alex Bond. "But there is no "away.'" *(The Week magazine, June 2, 2017)***

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**Pollution in all its forms killed 9 million people globally in 2015 and led to $4.6 trillion in damage, according to researchers at the Lancet Commission of Pollution and Health*, (Bloomberg.com, as it appeared in The Week magazine, November 3, 2017)***

**Forty million acres -- 2 percent of the land in the U.S. - is covered with lawns. Americans burn 800 million gallons of gasoline a year in their lawnmowers. *(U.S. News & World Report, as it appeared in The Week magazine, May 20, 2005)***

**The dangers of growing light pollution: The proliferation of artificial light across the world is blurring the distinction between night and day, a significant shift that has major consequences for human health and the environment. Using a calibrated satellite radiometer, which can detect radiance, researchers found that artificially illuminated outdoor space grew by 2.2 percent each year between 2012 and 2016. Much of this increase is the result of people in developing nations in the Middle East and Asia gaining access to electricity and outdoor lighting, reports The Washington Post. But exacerbating the problem is the widespread transition to LED lights, which are cheaper and more efficient than traditional lighting. People were expected to use fewer lights when they switched over to LEDs; instead -- presumably because the lights are cheaper -- they are using more. Scientists warn that this perpetual glow is threatening human health and ecosystems that have evolved to rely on predictable patterns of day and night. The blue light emitted by LEDs is particularly disruptive to circadian rhythms, which govern the behavior and biological processes of most living things, including people. Light-polluted skies are also taking a toll on plants and wildlife, disrupting pollination, reproduction, migration, feeding, and other natural behaviors. "The problem is that light has been introduced in places, times, and intensities at which it does not naturally occur," says co-author Franz Holker of the Leibniz-Institute of Freshwater Ecology and Inland Fisheries. "Many organisms have had no chance to adapt to this new stressor. *(The Week magazine, December 15, 2017)***

**Michigan's car-free island haven: On Mackinac Island, the worst traffic jams are caused by horse-drawn carriages, said Michael Bailey in The Boston Globe. Motor vehicles have been banned from the popular Michigan summer colony since 1898, so everyone walks, bikes, or rides the carriages. One "easy, excellent" bike trail is the loop around the island, 80 percent of which is state park land. For spectacular views of Lake Huron, stop a mile outside town and climb Arch Rock, a limestone arch that was sculpted by receding glaciers. After cycling the 8-mile loop, you can quench your thirst at the Draught House, which has 34 Michigan craft beers on tap. Kids might prefer stopping at one of the many fudge shops that line Main Street before the family walks to Fort Mackinac, where period actors give musket and cannon demonstrations. "The views of the town below, of the vast blue of the Straits of Mackinac and Lake Huron beyond, and of the magnificent Mackinac Bridge, are stunning." *(The Week magazine, July 15, 2016)***

**Microplastics found in human blood: Tiny bits of non-biodegradable plastic litter the planet, from the heights of Mount Everest to the depths of the Mariana Trench. Now, for the first time, scientists have found these microplastics in human blood, reports The Guardian (U.K.). Researchers analyzed blood samples from 22 healthy adults and found plastic particles in 17 of them. Half the samples had the PET plastic commonly used in water bottles; a third contained polystyrene, used in food packaging; and a quarter had polyethylene, the plastic in grocery bags. The discovery shows that the particles – some of them 140 times smaller than the width of a hair – can travel around the body. “It is certainly reasonable to be concerned,” says study author Dick Vethaak, from Vrije Universiteit Amsterdam in the Netherlands. “Where is it going in your body? Can it be eliminated? Excreted? Or is it retained in certain organs?” It’s unclear what impact the microplastics inside us have on our health. In laboratory experiments, though, they have been shown to cause damage to human cells, and air pollution particles inhaled into the lungs cause millions of early deaths a year. Researchers also aren’t sure how microplastics enter the bloodstream. Vethaak says they may come through food or water, or possibly from personal-care products – such as toothpaste or lip gloss – that are accidentally ingested, or from dental polymers, or even tattoo ink. *(The Week magazine, April 15, 2022)***

**As humans, we are exceptionally good at ruining everything. The ocean? Presently covered in an estimated 270,000 tons of plastic trash. The majestic Mount Everest? Oops! Turns out we pooped all over it. Yes, last week the chief of Nepal's mountaineering association said that human waste on Everest is 'piling up' and that the country's government needs to make sure climbers dispose of their waste in order to protect the mountain. This confirms my long-held theory that human beings are dreadful. We befoul everything we touch, and I don't think we should be allowed to touch any more things. We shouldn't be allowed on Everest, the moon, or Mars. We should just stay home and keep our messiness to ourselves. *(Rex Huppke, in the Chicago Tribune, as it appeared in The Week magazine, March 20, 2015)***

**Maybe pollution is nature's way of saying, "So you think you're smart!" *(Mal, Washington Star Syndicate)***

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**A new study has calculated that there are 5.25 trillion small and large pieces of plastic, weighing a total of 269,000 tons, floating in the world's oceans. *(The New York Times, as it appeared in The Week magazine, December 26, 2014)***

**Our plastic-clogged planet: The world is filling up with plastic. In the first comprehensive assessment of global plastic production, researchers have calculated that humans have created an astonishing 9 billion tons of the synthetic polymer since 1950 -- and 7 billion tons of it have been thrown away. Of the discarded plastic, just 9 percent has been recycled and 12 percent incinerated; the remaining 79 percent is either clogging up landfills, littering landscapes, or floating in the ocean. The problem is only getting worse: Half of all global plastic production has taken place in the past 13 years. The researchers estimate that by 2050, there will be more than 13 billion tons of discarded plastic worldwide. "The danger is permanent global contamination with plastics," lead author Roland Gayer of the University of California, Santa Barbara, tells The Washington Post. "It's just going to be everywhere in the soil, in the ocean, in the sediment of the ocean floor." Even the beaches of Hawaii now have plastic bits mixed in with the sand. A team of oceanographers recently discovered off the coast of Chile a plastic garbage patch bigger than the state of Texas, similar to the vortex of floating plastic debris in the North Pacific. Most plastic products, such as food packages, are designed to be used once and then discarded. Recycling rates remain low, especially in the U.S.: Europeans recycle 30 percent of their plastic and the Chinese 25 percent, versus just 9 percent here. *(The Week magazine, August 11, 2017)***

**Twenty companies were responsible for producing 55 percent of the 130 million tons of single-use plastic waste in the world in 2019. ExxonMobil led all global plastic-waste polluters with 5.9 million tons; Dow Chemical (5.5 million) and China's Sinopec (5.3 million) were just behind. *(TheGuardian.com, as it appeared in The Week magazine, May 28, 2021)***

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**Air pollution at school: Children who attend schools near busy roads could see their brain development hindered by air pollution, according to a new st5udy by Spanish scientists. Researchers in Barcelona spent a year tracking the developmental progress of more than 2,700 children ages 7 to 10 at 39 schools in the city. They found that the cognitive skills of students at schools near congested roads, where air pollution was measurably higher, improved at markedly slower rates than those children who breathed cleaner air. While children in low-pollution areas improved their working memory -- such as their ability to remember and recall items on a list -- by 11.5 percent over the year, kids in higher-pollution areas improved by just 7.4 percent. Those findings held up even after accounting for factors like school noise, education quality, and the children's different socioeconomic backgrounds. To reduce children's exposure to air pollution, the researchers propose installing particle filters on school buses and keeping road-facing windows in classrooms shut at all times. But Dr. Jordi Sunyer, the study's lead author, tells MedicalDaily.com that the best solution is for local authorities to cut the amount of air pollution around schools, a move that will "necessarily require reduction of traffic." *(The Week magazine, March 20, 2015)***

**Smog's global reach: Air pollution from China and other Asian countries is intensifying storms over the Pacific Ocean, setting in motion a chain of meteorological reactions that appears to be driving changes in weather patterns across North America. That's the conclusion of a decade-long research project examining the impact of Asia's pollution on weather systems. The main culprit is aerosols -- fine particles suspended in the air that impact the formation of clouds. "Natural aerosols come from sea salt tossed up by waves and dust blown off land, but man-made aerosols from coal-fired power plants, vehicle emissions, and other industrial activities increasingly outnumber those particles. "Aerosols provide seeds for cloud formation," Texas A&M atmospheric sciences professor Renyi Zhang tells CNN.com. "If you provide too many seeds, you fundamentally change cloud patterns and storm patterns." Researchers determined that the excess aerosols have led to stronger cyclones, increased precipitation, and a faster transfer of heat from the tropics toward the North Pole. The Pacific storm track feeds into weather systems in other parts of the world, so scientists say the pollution-fueled pattern changes may have contributed to the extreme cold that engulfed much of the U.S. this past winter. *(The Week magazine, May 2, 2014)***

**Ad for bicycles: "Pollution solution" *(Tim McKernan, in Reader's Digest)***

**In some areas the air is so polluted that tires wear out from the inside. *(The Milwaukee Journal)***

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