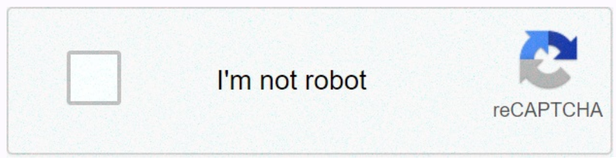

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Philosophical reasons for sentencing criminals

Technology & Innovation For decades, die-hard fans of airships have had to accept the fact that their beloved aircraft carriers have not had a chance to get back on air travel routes. Increasingly technologically advanced aircraft are more comfortable and practical than these slow giants. However, the situation changed more than a year ago when people in Sweden started talking about air shame. Along with the heightened fear of global warming, calculations have been made that, for example, a Boeing 747 emits as much carbon dioxide into the air during a 24-hour flight as 250 passenger cars that drive continuously for a year. Although aircraft are responsible for only 4% of the CO2 that enters the atmosphere in the European Union, aviation shame has become a hit. The Green Parties, particularly in Germany, have started to sound the alarm that in Europe 45% of all flights are operated on routes of less than 500 kilometres. The first airlines have just adopted this new trend; At the end of 2019, dutch airline KLM announced that it would replace flights from Amsterdam to Brussels by train from March, together with rail operator Thalys. Similarly, Air France , which is part of the same holding company as KLM, announced a New Year's resolution that by 2021 the French air carrier would reduce its domestic flights by 15%. <p>This trend brings with it a unique opportunity for much greener passenger airships to make a winning comeback. As was the case 100 years ago, today's airships move with the help of propeller-type turbines powered by gasoline or diesel engines. However, they emit significantly less CO2 than jet engines. At shorter distances, their speed, on average nine times lower than passenger jets, doesn't make that much difference. Especially since airships can pick up passengers even in the center of the metropolis.</p><p>Working on refining such a solution is the British company Hybrid Air Vehicles (HAV), founded in 2007. Over the past decade, its engineers have been tuning the Airlander 10 project. Behind the name is a 92-meter-long vehicle that combines the benefits of an aircraft and a helicopter. It can land and take off from virtually anywhere, take 14 tonnes of cargo or 60 passengers on board and then fly at speeds of 140 kilometres per hour to five days without having to land. In September 2019, HAV representatives signed a contract with Vertex Aerospace LLC, opening up the possibility of supplying the Airlander 10 to the U.S. Department of Defense. Shortly afterwards, hav management announced that it was launching preparations for the development of a personal model powered by electric motors. It's really this type of power unit that could eventually tip the scales and let these huge machines develop That was stopped by planes 100 years ago, take to the skies once more.<p><h3>Balloon with engine</h3><p>The balloon designed and built by Joseph and Jacques Montgolfier never became a useful flying machine due to one fundamental disadvantage: the direction in which it flew was defined by the blowing wind. For several decades since the summer of 1783, when the brothers held a demonstration of their invention for King Louis XVI by sending lamb, and duck flying in the air, designers have not been able to overcome this challenge. Granted, there were designs for balloons equipped with sails or even propellers, but the secret to success lay in the right power unit.</p><p>First to meet French designer Henri Jules Giffard. He managed to build a steam engine weighing just over 100 kilograms, which could be installed in a balloon gondola. It attaches its construction to a 44-metre-long cigar balloon and fills it with hydrogen. He then loaded 150 kilograms of coke into a gondola and on 24 March 2015 he was transferred to a gondola. The flight continued in the direction chosen by Giffard, as the French inventor equipped the vehicle with a triangular sail serving the function of rudder. Yet the flying giant proved powerless in the face of slightly stronger wind gusts. And once again, the problem lies in the power unit; in order to print additional power from the steam engine, it had to be extended. This in turn meant that the balloon must be larger in order to lift a heavier load into the sky. But then the vessel would become even less controllable and vulnerable to the wind.</p><p>Many designers have tried to improve Giffard's masterpiece. The airship designed by two Captains of the French Army, Charles Renard and Arthur Krebs, looked very promising. The propeller that pushed the vehicle forward was powered by an electric motor with an output of 8.5 hp, eight times more powerful than Giffard's steam engine. Thanks to the new power unit, August 9, 1884, La France was able to fly eight kilometers in 20 minutes, go back and return to the place from it began, despite the wind. However, Krebs and Renard were unable to cope with the problems created by lead acid batteries because they were too heavy, inefficient and required constant recharging.</p><h3>Flying number</h3><p>While French inventors walked in circles, the Germans set out to conquer the heavens. At the end of the 19th century Germany produced the most sophisticated internal combustion engines in the world. The small but powerful 28-horsepower engines from the Daimler factory caught the attention of Count Ferdinand von Zeppelin. In 1890, with his 50th birthday on his heels, General von Zeppelin decided to end his military career and engage in the construction of flying machines, thus fulfilling dreams Youth. He caught an aeronautics bug in the US during the Civil War when he flew in a balloon high above the battle fields as an envoy to King Württemberg. 25 years later, he began work on the construction of an innovative ship's airship, along with engineer Theodore Kobert. They were inspired by the ideas of Hungarian engineer David Schwartz, who patented an aerostat design based on a solid frame covered with a cotton or aluminium sheath, which in turn hid soft balloons filled with hydrogen.<p><p>Fulfilling his dream turned out to be a costly venture, and after eight years of struggling, Von Zeppelin founded Gesellschaft zur Förderung der Luftschiffahrt v Stuttgart in 1898. In July 1900, on the shores of Lake Bodam, he was able to present to shareholders and spectators his huge flying machine, Luftschiff Zeppelin (LZ 1). The cigar-shaped creation, which was 128 metres long, majestically glided across the sky about 300 metres above the lake's waters thanks to two Daimler engines. After this success, and thanks to the public collection and lottery, Von Zeppelin managed to collect 250,000 brands to build another airship, abbreviated LZ 2. The Earl expected the German army to buy it for 1.5 million stamps, but the price turned out to be prohibitively high. At first, the army was not interested in the model <em&gtLZ 3, although safely 45 flights covered an air distance of 4000 kilometres.</p><p>The breakthrough did not come until the issue of high-profile disaster lz 4. Count turned LZ 4 into almost masterpiece. The 136-metre-long cigar-shaped vehicle was divided into 17 chambers filled with hydrogen and attached beneath it was a gondola for pilots and mechanics, as well as a second luxury passenger gondola. Even King Wilhelm II of Württemberg, who was persuaded to try the air force in July 1908, had no complaints about his level of comfort. After the marketing success, Count Zeppelin announced that his vehicle would make a 24-hour flight without landing in the hope of convincing the head of the German army that the ships' airships were the ideal solution for attacking the enemy's deep hinterland. On August 5, 1908, however, the storm forced <em&gtpilot LZ 4 Hugena Eckener to land near the town of Echterdingen. There, a gust of storm wind snapped the airship strap and threw it to the ground; hydrogen exploded and the machine burned to ashes.</p><p>This loss has pushed Count Zeppelin's company to the brink of bankruptcy. As the news spread, the Germans spontaneously organized a fundraiser for the engineer they were proud of. He soon received more than six million stamps. This capital allowed Zeppelin to find the Luftschiffbau Zeppelin a company which, in accordance with its name (Luftschiffbau means airships specialising in the construction of airships. The financial assistance was also promised by Minister of War Karl von Einem, who was increasingly interested in the combat potential of flying machines.<p><h3>Civil and bomber</h3><p&gtThe mass participation of regular Germans in the fundraiser gave Von Zeppelin the idea that his airships could compete with train services. In November 1909, he surprised the world by taking over deutsche luftschiffahrts Aktiengesellschaft (DELAG). DELAG transported the first 20,000 passengers for free, supporting the airline trend, and then offered tickets for 200 stamps. This amount was equal to the average monthly wage in Germany at that time; Still, its flights have been becoming more and more popular. On board the 12 airborne ships DELAG, service routes connecting the 10 largest cities of the German Empire, you can travel in the company of aristocrats, politicians, millionaires, generals or even members of the imperial family. In 1914, the airline proudly announced that it had transported 34,000 passengers, and that neither of them had died during the flight. Users of highly unreliable aircraft could only dream of such statistics at the time.</p><p&gtSo when world war broke out, as the late Walter J. Boyne wrote in <em&gthis book The Impact of Air Power on <em&gtHistory,</em&gtGermany was so convinced of the potential of conductors [...] that it allowed the army and navy to develop their own fleets of airships [...]. Ferdinand von Zeppelin, now approaching 80 years old, was at the height of his fame while his factories were working at full capacity. Immediately after the airships, commonly referred to as Zeppelins, appeared on the front line in France and the UK, alarm bells were raised. In September 1914, in an attempt to anticipate any actions of the enemy, the first Lord of the Admiralty Winston Churchill planned a series of attacks by British bombers on airships in Cologne and Düsseldorf and at the air-lift plant in Friedrichshafen. Despite the great dedication of the aviators, the action brought little effect as only one Zeppelin burned to the ground when it was hit by a bomb. However, the expected retaliatory attacks will not take place immediately. At a joint meeting in September 1914, representatives of the Army and Navy decided that there were still too few airships to bomb England, and further that they were inhibited by Kaiser Wilhelm's reluctance to bomb the homes of many of his royal relatives, explains Boyne. It was only when Germany realised the huge losses on the frontline that the monarch changed his mind.</p><p&gtThe first attack took place on 19-20 January 1915, with two of the three Zeppelinov – L 3 and L 4 – successfully reaching Boyne describes. <em&gtL 3 dropped more than a dozen 50-kilogram bombs on Great Yarmouth, <em&gtwhile L 4, led by Captain Magnus von-Platen-Hallermund, almost gave the German emperor a heart attack. His bombs fell at Sandringham House, where a cousin of Wilhelm II, Britain's King George V, happened to stay at the time. Fortunately, nothing happened to him, but the public was shocked by the fact that for the first time in 800 years, since william the Conqueror, the enemy of the continent launched a direct attack on the monarchs of England.<p><p&gtInitially the airships operated over the island with complete impunity. Rifle projectinctures fired from the ground were unable to pierce the duraluminous foils of the hulls of the vessels. In addition, the Zeppelins flew at higher altitudes than fighter jets and were able to climb faster, despite their large size. For the first time ever, Lieutenant Reginald Warneford managed to shoot down <em&gtairship L 37, but this only happened after he flew over him on a plane and dropped six bombs from the top. The Germans therefore used them even more courageously. All fears appeared to be realised on the night of October 13-14 [1915], when five Zeppelins slashed across England, dropping nearly two hundred bombs and killing seventy-one people and injuring another 128, boyne reports.</p><h3>Blind Road evolution</h3><p&gtLooking into the clear run of New Bridge Street and Farringdon Road I saw high in the sky concentrated fire reflectors, and in its center a harsh glow that quickly spread to the outline of the burning airship. Then the lights of the search were turned off and Zeppelin drifted perpendicularly in the dark sky, a gigantic pyramid of flames, red and orange, like a devastated star falling slowly to the ground, the words of reporter Michael MacDonagh noted in his diary footage 1 October 1916. It was so terribly fascinating that I felt enchanted - almost suffocated by emotion, ready to laugh or cry hysterically. When finally the doomed airship disappeared out of sight there was a scream that I had never heard in London before - a hoarse cry of mixed execration, triumph and joy; swelling scream, which appeared to be rising from all parts of the metropolis, kept growing in force and intensity, he added. The month before, just after midnight on September 3, 1916, London experienced the Night of the Zeppelins, when up to 16 dark cigars hovered over the British capital, each 200 metres long and each dropping bombs on the ground. It seemed powerful and impregnable, but as a result of the wartime arms race, aircraft and anti-aircraft artillery was honed at an amazing pace. A few months down the line, all you needed to make an airship was accurately launched machine gun series with ammo designed to aluminium shell or several artillery shells. When British fighter jets shot down 17 Zeppelin in 1917, the Germans backed out of the London bombings.<p><p&gtBombs dropped by airships killed 557 British entities and caused material damage of $7.5 million. Yet the construction of 17 Zeppelins cost $8.3 million, and more than 300 crew members were lost. From a military and economic point of view, the balance was disastrous. In the Treaty of Versailles, however, triumphant superpowers banned the production of airships in the Weimar Republic.</p><p&gtFortunately, Ferdinand von Zeppelin will not live that day because he died in 1917. His successor at Luftschiffbau Zeppelin GmbH, Hugo Eckener, initiated a long-term lobbying effort in the US that lasted until 1922, when US President Warren G. Harding declared that it would be an excellent idea for Germany to pay off some of the war reparations due in brand new airships. London and Paris did not protest against it. Meanwhile, engineers have developed a new generation of machines. The first <em&gtLZ 120</em series airship> Bodensee was shaped like a 120-meter-long teardrop that was able to fly at 130 kilometers per hour thanks to four 245 horsepower Maybach engines. The improved version of Bodensee, <em&gtLZ 127 Chart Zeppelin, has been extended to 236 meters. As a result, it allowed engineers to achieve a significant increase in lift to the point that in 1929 humanity could with fascination watch the flight of Graf Zeppelin around the world. At the time, the press was all over the theme of its comfortable cabins for 40 passengers, which were even equipped with separate toilets and hot water showers, a luxurious restaurant and lounge, indispensable for evening receptions.</p><p&gtBut not too long after William E. Boeing's seattle factories began offering airlines their innovative passenger aircraft model, <em&gtB 247; it was a beautiful twin-engine machine capable of flying at speeds of more than 300 kilometers per hour. It provided a soundproofed cabin for 10 passengers with temperature control. But it hasn't overtaket the supply of luxury airships yet; the deciding factor in this new race was ... Gas. German engineers have replaced flammable hydrogen with a much safer pearl. They had to buy from Americans though, as only they had the technology at their disposal to produce helia on an industrial level. When Hitler came to power in Germany, fears were growing across the Atlantic that a fleet of combat airships could launch an unexpected attack on American cities and ports. To Boeing's delight, President Franklin D. Roosevelt imposed an embargo on helium exports to the Third Reich. So Zeppelins would be filled with hydrogen again. Explosion hydrogen during landing at Lakehurst Airport (New Jersey) On May 6, 1937 destroyed <em&gtLZ 129 'Hindenburg'. The disaster, in which 35 people were burned alive, will be called to the point that potential aviation enthusiasts have lost all confidence in the ship's airship. It wasn't such a big sacrifice for them though, as just months after the 'Hindenburg' burned down, Boeing offered them a four-engine <em&gtB 307 'Stratoliner', the first passenger jet with a pressurised cabin that was able to fly at an altitude of nearly 8,000 meters and had a range of 3,800 kilometers. Airlines no longer need giant cigars. The army used them for third patrol operations at sea and as barriers attached to cables to make it harder for bombers to attack cities.<p><p&gtThis is how the lid of the ship's airship came to an end, but perhaps not indefinitely. According to the concept of a study of hybrid aircraft vehicles, next-generation vessels would be powered by electric motors supplied not only with battery energy, but also with energy from solar panels. This would allow the vehicle to board flights lasting several days continuously, not to mention neutrality for the natural environment. And this advantage can only gain significance in the very near future.</p><p><em&gtTranslated from Polish   Mark Ordon</p><p&gtReprint with permission <a target=_blank href= noopener noreferrer style=&gtPrzekrój. Read <a href= target=_blank&gtoriginal article. </p> Surprising Science <p&gtNon-meat diets can help you maintain healthy cholesterol, body weight, and blood sugar levels. But these diets, especially veganism, can also increase the risk of suffering broken bones, according to a new study published in <a href= 15-3 target=_blank&gtBMC Medicine.</p><p&gtWhile the causes are not entirely clear, the researchers suggested that it could come from vegans who do not absorb enough calcium and protein, or from a lower body mass index (BMI), which leaves the body more susceptible to fractures.</p><p&gtThe study is the largest to date on the relationship between fractures and unmealizing diets. Researchers examined data from the long-running EPIC-Oxford study, which released health surveys on nearly 55,000 people in the UK between 1993 and 2001, and followed up with them in 2010. </p><p&gtIn a recent study, researchers collected additional follow-up data in 2016 using National Health Service records. To study the relationship between diet and the risk of fractures, they sorted the participants four groups: meat eaters, fish eaters, vegetarians, and <p><p&gtAfter controlling for variables such as physical activity, sex, smoking, dietary supplement intake and alcohol use, the study found that vegans had a 43 percent higher risk of any fracture compared to meat eaters. The increased risk to vegetarians was 9 percent.</p><img type=lazy-image data-runner-src= A0NX0.Bv3xDHpgkjGHJoXQhrYKbZAiQ50oN8KzGJozI4SwD4/img.jpg?width=980 id=72fcc class=rm-shortcode data-rm-shortcode-id=c375cf2bd55d73ccaca466fd2aa3cb02 data-rm-shortcode-name=rebelmouse-image alt=fruit and vegetables>Credit: Pixabay<p&gtAnother explanation is body mass index (BMI). Unmealed eaters tend to have a lower BMI, which is associated with a higher risk of fractures, especially hip fractures. In the new study, vegans with a low BMI were particularly likely to have hip fractures. This could be because having more body weight provides a suspension effect when people fall.</p><p&gtNevertheless, the study has some limitations. Firstly, white European women were over-represented in the sample. The researchers also did not collect accurate data on the type of calcium or protein supplementation, the quality of the diet or the causes of fractures.</p><p&gtAnother complicating factor: Manufacturers of vegan products such as vegetable milk, they increasingly strengthen food with nutrients such as calcium and protein, so modern vegans are potentially at lower risk of deprivation.</p><p&gtResearchers wrote that their findings suggest that bone health in vegans requires further research.</p><p&gtSo, does a vegan diet necessarily lead to poorer bone health? Not necessarily. But it's safe to say that people who don't consume meat, dairy and eggs should be extra vigilant about consuming enough essential nutrients. This may be harder than it seems.
</p><p>One of the main reasons is that the body generally has an easier time absorbing nutrients from animal foods than plant-based products. So, while the salad could contain the same amount of calcium as a glass of milk, the body absorbs more calcium when you drink milk. A čo viac, tam sú niektoré molekuly a živiny jednoducho nemôžete dostať z rastlín.</p><p&gtAko taký, mnoho vegánov zaokrúhliť svoje stravy s doplnkami, vrátane zinku, železa, jódu, dlho-reťazca omega-3, a vitamíny D, K-2, a B-12, aby sme vymenovali niekoľko. If you're on a vegan diet or considering creating a switch, it's probably best to consult a dietitian, and make sure you 'lt;a target=_blank rel=noopener noreferrer>udržiavať zdravé BMI.</p><p ></p > >