

BICYCLE LIBERATION

by Travis Kelly

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One of the great wonders of human history is how the humble bicycle was not invented until the 19th century, while the basic principle — a two-wheeled vehicle — was created 5000 years beforehand. That's a very long R&D gap. It took the greatest natural catastrophe in civilization to finally spur the leap from cart and chariot to the bicycle — the explosion of Tambora in 1815.

The largest recorded volcanic eruption, Tambora killed 71,000 people directly and created a "volcanic winter" in 1816, the "year without a summer," resulting in the worst famine of the 19th century. Crops failed and livestock starved across the Northern Hemisphere. Not only the food supply, but also Europe's whole transportation network was devastated. This led a German civil servant, Karl von Drais, to think of a mechanical replacement for the horse. Patented in 1817, his design was basically a load carrier: two wheels hitched inline to a wooden plank which the rider straddled and propelled by walking or running while pushing and steering with the handlebars. Soon they were used for recreation also and became known as "speedwalkers."

Karl von Drais' brainchild evolved into the "velocipede," with saddle and pedals added to the front wheel. In London, it was scoffingly known as the "hobby horse" or "dandy horse," after a children's toy and the rich dandies who mostly rode them. The most well known was the "penny farthing," named after a large coin next to a very small coin, which is what this dangerous contraption resembled. Capable of great speed with its huge front wheel — if you were able to actually mount the thing and get it going — it was just as difficult to stop safely. Many ended up crippled or worse. Incredibly, however, an English adventurer, Thomas Stevens, traveled around the world on this death trap, beginning in 1884. He carried a .38 revolver and clothes and gear strapped to the long curving spine of his penny-farthing. He was a guest of honor of the Shah, hounded by bandits and bureaucrats in other regions, but he made it, with a few steamship detours, without breaking his neck.

After the "safety bicycle" was invented — the design we know now, with two equal-sized wheels — it soon became a factor in social progress, especially in the suffragette movement, giving women unprecedented mobility in their shocking "bloomers." Susan B. Anthony said: "Let me tell you what I think of bicycling. I think it has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance. I stand and rejoice every time I see a woman ride by on a wheel...the picture of free, untrammled womanhood." In 1895, a Latvian immigrant to America, Annie Londonderry, became the first woman to cycle around the world on a 21-pound "men's" bike. Unlike Amelia Earhart (or Magellan), she made it. Restricting mobility is the first principle of any kind of oppression: witness the Saudis and their absurd restriction on women driving.

The bicycle, too, enabled a "children's revolution" — kids were free to escape their elders' gaze, ride down to that far creek under the willow trees and plant their first kiss, read naughty magazines, or smoke their first cigarette. Let freedom ring! In the '70s,

the BMX bike was developed, enabling daredevil teenagers to go further from the paved neighborhood and test their agility in dangerous stunts. A decade later, the adults were inspired by this frolic to come up with the mountain bike and experience an early second childhood with even more dangerous stunts.

There is one more revolution the bicycle is well suited for: liberating us from our extravagantly expensive, crippling, violent dependence on foreign oil. 57% of our oil consumed is imported. Transportation accounts for 27% of our total energy consumption, and 19% of family budgets. If more of us cycled regularly — not only for recreation but also for commuting, shopping and general mobility — it would lower demand for energy (and thus lower prices) and help balance our budgets, while promoting a healthier population and reducing skyrocketing health care costs. That's really a win-win all around.

Many people resist bicycle commuting because of the daily distance involved, cargo to carry, or the discomfort of riding the standard upright "diamond frame." All of these problem can be overcome with electric motor assists for any bicycle, capacious new trailers on the market, and the recumbent and "crank forward" bikes. There are various electric motor designs: two of the most reliable are made by BionX and Ecospeed. They help you up the hills, can increase speed on the flats, augment hauling power, have selective levels of power assist, and even complete console "dashboards." Bicycle trailers are made to haul everything from children to small boats.

The recumbent and crank-forward bikes totally eliminate the neck strain, wrist numbness, and aching crotch suffered by many riders on DF bikes on lengthy rides. It's another wonder that more people don't ride them. Every cycling speed record has been set by recumbent bikes, because they enjoy a huge advantage against the main bane of cyclists (aside from steep hills) — headwind. I ride a CLWB (Compact Long Wheelbase) cruiser around town, which reminds me of my liberating Schwinn Stingray as a kid: low-slung, big comfy seat, crank forward, chopper bars. It's a blast to ride. So why aren't competitive racers riding recumbents?

Because they were effectively outlawed from races by the French UCI (Union Cycliste Internationale) in 1934, after a second-tier racer, Francis Faure, entered a contest on his recumbent, designed by Charles Mochet. At the start of the race, the elite riders ridiculed him as if he were riding another "dandy horse" — "Faure, you must be tired and want to go to take a nap on that thing. Why don't you sit up upright and pedal like a man?" Faure didn't have a rear-view mirror on his bike, but after a few miles that's the only way he would have seen his competitors — in his dust.

The UCI decision was based on emphasizing the performance of the rider over the machine --- and the interests of established upright bike manufacturers against the revolutionary new recumbent. They lobbied the UCI hard, and ever since the more aggressively posing, "masculine" upright has dominated over the more "feminine" recumbent position, which is considered "odd" looking by many. That, of course, is only a case of habit and conditioning: had the UCI not made its monopolistic decision, we might all be riding recumbents today and consider diamond frames odd.

Rans and Bachetta are two of the leading American makers of recumbent bikes, with a host of smaller scale entrepreneurs producing interesting new designs. A Montana

company, Lightfoot, has a whole line with lightweight fairings and canopies for weather protection. A company in Colorado Springs, Angletech Cycles, offers a wide selection of customized bikes and accessories, from entry-level to titanium-frame performance models over \$6000. An Australian company, Cruzbike, has produced an FWD recumbent with full suspension. Then there are recumbent "trucks," trikes, high-racers, low-racers, hand cycles, tandems and the modern "velomobile" in races sponsored by the HPVA (Human Powered Vehicle Association).

The Canadian Automobile Association estimated the cost savings of owning and operating a bicycle vs. a car: an additional \$5000—\$6000 per year could be spent elsewhere. An electrically assisted bike can travel well over 1000 miles for the cost of a \$4 gallon of gas. The latest lightweight lithium-ion batteries have long life spans, operate well in the cold, and are incredibly cheap to recharge (in about 3 hours, for pennies), especially if solar charging is used.

Fortunately, Grand Junction is a near ideal city for biking: relatively flat terrain, dry climate, and abundant bike lanes and trails. So what's to lose in switching more of your transportation to the humble bicycle? You'll live longer and healthier, have more money to spend, and may even help save the planet in the bargain.