Brits and Bikes
The British value bicycles more than vaccinations, computers, or electricity, according to a poll run by The Times newspaper last month. Aided by some ballot stuffing, the Rover Safety Bicycle, which with its rear-wheel drive and other modifications turned bikes into a practical mode of transport after being introduced in 1885 by John Kemp Starley, was voted the greatest British invention of the past 250 years, garnering almost two-thirds of the votes cast.

In The Times' Internet poll, electricity (Michael Faraday) came in a poor second with 20%, followed by vaccination (Edward Jenner) at 9% and the computer (Charles Babbage) and the World Wide Web (Tim Berners-Lee) at 7%. The electric light (Joseph Swan, who came up with a bulb the same year as Thomas Edison) won in the runner-up category (3%). The poll was aimed at counteracting cynicism and boredom over science and technology, says Lindsay Sharp, director of the U.K.'s Science Museum in London and one of the competition judges. But it was turned into a testimonial for two-wheeler's, says Sharp, by a "cabal" of cyclists who bombarded The Times' Web site.

Fish Consciousness
Citing recent research on the surprising intelligence and sensitivity of fish, the animal-rights group People for the Ethical Treatment of Animals (PETA) has launched a new Fish Empathy Project. "Fish are smart and suffer a great deal," says project manager Karin Robertson.

PETA relies in particular on recent research by biologist Culum Brown of the University of Edinburgh, U.K., who has followed individual fish over time and suggests that they have distinguishable and stable personalities with traits such as boldness and risk taking. Brown also claims to have demonstrated that hatchery-reared fish released to the wild can learn "life skills" from "trainer fish."

The group also cites animal-welfare scientist Donald Broom of the University of Oxford, U.K., who argues that the fish's system for sensing and relaying pain to the brain "overlaps significantly" with that of mammals. The issue of whether fish feel pain is still highly controversial, though.

Neuroscientist James Rose of the University of Wyoming in Laramie says fish lack the complex brain structures—namely the neocortex—necessary to experience pain as mammals do.

PETA eventually hopes to push the fishing industry toward more humane practices. For now, the campaign is geared toward raising public awareness.

The Lying Brain
Although it's easy for psychopaths and well-trained spies to cheat the lie detector, many scientists believe it may be possible to nab liars by going straight to the source of mendacity: the brain.

A recent study by radiologist Scott Faro of Temple University in Philadelphia, Pennsylvania, has furnished some new evidence. In Chicago last week at the meeting of the Radiological Society of North America, Faro reported on an experiment in which six subjects fired blank bullets from a toy gun while five others acted as "innocent" controls. The researchers then quizzed the "guilty" and "innocent" subjects while their brains were scanned using functional magnetic resonance imaging. The shooters were instructed to lie.

The scans revealed that lying and truth-telling activate decidedly different areas of the brain. And lying generated more overall activity, firing up regions associated with emotions as well as those involved in the inhibition of responses, Faro's team found. Although the sample size was small, the study will be useful because the experimenters also collected physiological data, such as heart rate and blood pressure, used in traditional polygraph tests, notes Stanford University neuroscientist John Gabrieli. The comparison between brain imaging and physiological data could help advance the art of lie detecting, he says.

Eclipse Close-Up
At left is "the first family portrait of Earth and moon taken during a lunar eclipse," according to the European Space Agency's chief scientist, Bernard H. Foing. The composite photo was taken by cameras on the SMART 1 (Small Missions for Advanced Research in Technology) spacecraft over a 6-hour period on 28 October. It shows views of Earth from 300,000 kilometers and views from 660,000 kilometers of the moon passing through Earth's shadow.

Foing says no other lunar mission has captured this spectacle because they all were in such a hurry to reach the moon. Propelled by a novel solar-powered engine that generates and ejects ions for thrust, SMART 1 took 13 months to reach lunar orbit.
A Shrine to Natural History

When Korean ophthalmologist Rhee Ki-seok was looking for a home for his lifetime collection of fossils and other artifacts, he was dismayed to find that the country had only two natural history museums. So he decided to build one of his own.

The result is a 6800-square-meter museum in the beautiful Gyeryongsong mountains west of Daejeon, which opened to the public this fall. Among its exhibits are a 600-year-old Korean mummy, an ancient mammoth, and a Brachiosaurus skeleton excavated in Montana by a dig that Rhee financed (www.krnamu.or.kr).

A veteran of the Korean war, Rhee made a fortune as one of the first opthalmologists to start a practice in his province and by opening a health sciences college in 1977. He spent $43 million on the museum, acquiring artifacts beyond his personal collection and hiring professors as consultants. Not only did the project receive no help from the government, the 83-year-old Rhee says he had to fight with officials in the nearby city of Daejeon to put up road signs to the museum.

But the outcome has been rewarding: With hundreds of visitors flowing in every day, the museum has already improved “cultural life” in the region, says Rhee. And he hopes it will inspire more Korean students to take up science.

AWARDS

Descartes winners. A pan-European team of life scientists and a transatlantic team of physicists are the joint winners of this year’s Descartes Prize from the European Union.

Molecular biologist Howy Jacobs (left in picture) of the University of Tampere, Finland, and his colleagues win half of the $1.33 million prize for elucidating the role of mitochondrial DNA in degenerative diseases and aging. The other half goes to a group led by Anders Karlsson (right, above) of the Royal Institute of Technology in Stockholm, Sweden, for developing telecommunication systems based on quantum cryptography.

Five people will share $330,000 as winners of an inaugural prize for science communication. The honorees are French film producer Vincent Lamy, Hungarian biochemist Péter Csermely, British broadcaster David Attenborough, German biophysicist Wolfgang M. Heckl, and Belgian metallurgist Ignaas Verpoest.

Psychology prize. Memory researcher Elizabeth Loftus has won the $200,000 Grawemeyer Award for Psychology from the University of Louisville in Kentucky. A professor at the University of California, Irvine, Loftus receives the honor for her research on false recollections, which has influenced the way courts and law enforcement agencies view eyewitness testimonies.

MONEY MATTERS

Bedside to bench. Germany’s Helmholtz Association has announced a program to help young researchers restart careers put on hold to raise families. Starting next year, the association will fund 29 “reentry” positions for Ph.D. students and postdoctoral scholars across its 15 research centers, which cover fields from space science to cancer research. The program is intended for both men and women, says program coordinator Christian Cobbers, who hopes to take a hiatus from his own career in administration once his first child is born next spring.

HONORS

One with nature. The Australian government last week named a section of the Great Barrier Reef after U.S. marine biologist Nancy Foster, who died in 2000 after a 23-year career at the National Oceanic and Atmospheric Administration. The honor is in recognition of Foster’s lifelong efforts to conserve coastal aquatic life, both as a researcher and an administrator.