Reviews

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ART

Courtesy of the Carnegie Museum of Art, Pittsburgh, acquired through the generosity of the Sarah Melon Scaife Family

Smokestacks spew soot over London's Waterloo Bridge in a painting that Monet completed in 1903.

Pollution's Poetic Beauty Caught by an Artist's Brush

"I adore London. . . . But what I love more than anything is the fog," the impressionist painter Claude Monet once told art dealer René Gimpel. Such fascination found expression in the almost 100 views of the city that Monet painted there between 1899 and 1901—paintings notable in part for miasmas swirling, dreamlike, across the canvas. Yet what Monet was so fond of depicting was actually smog—a fog made heavier and darker by smoke and chemical fumes. The pollution reached its pea-soupy peak during the late Victorian period and so smothered London's inhabitants that one writer described it as "a thick and nauseating veil" stinking of "sludge and rotten eggs" that rendered every object "greasy and viscous to the touch." Fueled by the 18 million tons of coal that London burned every year—which, in 1892, sent 200 tons of fine soot into the atmosphere every day—the smog at its most dense killed between 500 and 700 people a week. None of this deterred Monet, who, even as he fought a fit of pleurisy, painted the city's smog-swathed landmarks over and over. Such works, now on display at the Brooklyn Museum, include many scenes of Westminster and one especially beloved spot,

MONET'S LONDON: Artists' Reflections on the Thames, 1859-1914
The Brooklyn Museum
New York City
Through September 4
www.brooklynmuseum.org
Baltimore Museum of Art
October 2 to December 31
www.artbma.org

Waterloo Bridge (above), which Monet painted about 45 times. In this version completed in 1903, he captured not only the smog's many colors but also the pink-hued plumes of factory smokestacks that were its source. "The Thames was all gold," Monet wrote to his wife, Alice. "God, it was beautiful, so fine that I began to work in a frenzy, following the sun and its reflections on the water. . . . Thanks to the smoke a fog descended."

—Josie Glausiusz

GIZMOS

Extreme Pogo

FLYBAR 1200
www.flybar.com
$399.99

Courtesy of Flybar

Sudden expansion of 12 rubber strips inside the Flybar throws a rider into the air.

Unless you own a trampoline—or you've been to the moon—you probably don't know what it's like to bounce up to six feet into the air. But with the Flybar, you, too, can feel that sense of weightlessness that comes from flinging yourself off the ground again and again like a human grasshopper. Codeveloped by pro skateboarder Andy Macdonald, the aluminum Flybar is a pogo stick on steroids that gets its thrust from an internal array of 12 elastic strips connected to the foot pedals.

A team of *Discover* staffers who took the Flybar to a nearby park for testing quickly learned that it takes practice just to maintain a steady bounce, let alone soar to incredible heights. But passersby eagerly lined up for the chance to take a flying leap. One, a lawyer in a three-piece suit, bounded at least three feet into the air on his first try and then confessed that in his youth he had built his own rudimentary pogo stick. The Flybar can be adjusted, with some effort, for different rider weights and bounciness levels. It is, however, a relatively hefty contraption, at almost 20 pounds. Luckily, two lighter, cheaper, and more easily adjustable Flybar models—including one for kids—are due out later this year.

—Maia Weinstock

WE ALSO LIKE . . .

SATURDAY
Ian McEwan; Doubleday, $26

McEwan's acclaimed new novel doubles as a primer on neuroscience. Henry Perowne, a neurosurgeon drawn into a post-9/11 tale set in London, uses his working knowledge of the brain to dissect the motives of the characters he encounters. "There is much in human affairs that can be accounted for at the level of the complex molecule," he muses, diagnosing and describing diseases that include a moving depiction of dementia in his elderly mother.

—Josie Glausiusz

OAK: The Frame of Civilization
William Bryant Logan; W. W. Norton, $24.95

Viking longships may have wiggled through the water like dolphins. Such flexibility, writes arborist Logan, was due to the oak from which most were built. The versatile tree has flourished wherever humans have, its wood used for everything from baskets to cathedrals, its acorns for food, and its galls for the ink used to draft both the American Declaration of Independence and the music of Bach.

—Anne Haas

BOOKS

High-Tech Labs for the Hoi Polloi

The Defensible Dress, designed by a student in physicist Neil Gershenfeld's MIT class, wards off potential gropers by extending pricklelike piano wires.

Courtesy of Neil Gershenfeld/Basic Books

In Ghana, on the west coast of Africa, sunlight is free and abundant. Electricity is not. Yet in the city of Sekondi-Takoradi, the hot sun generates a cool breeze. There, amid a jumble of auto-repair shops, a garage-size factory equipped with a jerry-rigged array of computers, micromotor controllers, and laser cutters has built a solar-powered turbine that can operate cheap, portable air conditioners to refrigerate food on moving trucks.

FAB: The Coming Revolution on Your Desktop—From Personal Computers to Personal Fabrication
Neil Gershenfeld
Basic Books, $26

Physicist Neil Gershenfeld, the director of MIT's Center for Bits and Atoms, calls the factory a "fab lab"—a lab for fabrication or a fabulous laboratory—and has helped set up five other similar factories around the world, from San José in Costa Rica to inner-city Boston. Each fab lab is simple, small, and cheap, consisting of $20,000 worth of machinery networked with a few computers and some simple software that can tailor inventions to serve the people who create them.

The inspiration for this guerrilla science came from a popular class Gershenfeld began teaching at MIT in 1998, called How to Make (Almost) Anything. After seeing students create a stream of imaginative contraptions—such as a porcupine-inspired dress that used sensors, tiny motors, and piano wires to keep others out of the wearer's personal space—he and his team decided to take fab labs on the road. They discovered wellsprings of ingenuity everywhere they went. Shepherds in the Lyngen Alps of Norway fabricated radio tags that made it possible to track wandering sheep by satellite. In Pabal, India, inventors crafted a gadget to calculate the fat content in milk and the weight of rice so that government bureaucrats who normally did the measuring wouldn't dupe local farmers.

Gershenfeld argues that these labs are harbingers of the future. He foresees a time when inexpensive "personal fabricators" will find their way onto our desktops as surely as mainframe computers morphed from room-size machines into the laptops and iPods we use today. These personal fabs will assemble everything from appliances to clothes—anything, in fact, including themselves. Far-fetched? Perhaps. But then, who would have predicted today's common cell phone would have greater processing power than the computers that guided the Apollo rockets to the moon?

—Chip Walter

TELEVISION

A Portrait of the Scientist as a Cool Young Dude

Courtesy of Rob Kennard/WGBH

Aidan McArdle, as a young Einstein, ponders great ideas from a lowly post in the Bern patent office.

Einstein's Big Idea
NOVA/PBS
October 11, 8-11pm

In the opening scene of Einstein's Big Idea, a good-looking young man ambles through the streets of the Swiss town of Bern, eyeing pretty women with a sly smile. This is not the aged, silver-haired Einstein of popular imagination but a rebellious kid who cut classes and serenaded his paramour on the violin. Based on David Bodanis's book E = mc 2: A Biography of the World's Most Famous Equation, the docudrama is clearly out to overturn the stereotypes, but it does not limit itself to Albert's personal life. Acted scenes overlaid with commentary from prominent physicists and historians portray symbolic moments in the "200-year odyssey" that led to the famous equation. Amid the turmoil of the French Revolution, chemist Antoine-Laurent Lavoisier demonstrates that mass is never lost, no matter how a substance is transformed; 18th-century mathematical prodigy Émilie du Châtelet shows that the velocity of an object must be squared when calculating its kinetic energy; and Austrian physicist Lise Meitner proves, in 1939, that an atom can be split. Elaborate costumes and serviceable dialogue add a measure of verisimilitude while impressionistic imagery evokes the inscrutable mystery behind each brilliant revelation.

—Alex Stone

SCIENCE BEST SELLERS

1. THE DEVIL'S TEETH: A True Story of Survival and Obsession Among America's Great White Sharks
By Susan Casey, Henry Holt

2. 109 EAST PALACE: Robert Oppenheimer and the Secret City of Los Alamos
By Jennet Conant, Simon & Schuster

3. EVERYTHING BAD IS GOOD FOR YOU: How Today's Popular Culture Is Actually Making Us Smarter
By Steven Johnson, Riverhead Books

4. EVIDENCE OF HARM: Mercury in Vaccines and the Autism Epidemic: A Medical Controversy
By David Kirby, St. Martin's Press

5. THE GOLDEN SPRUCE: A True Story of Myth, Madness, and Greed
By John Vaillant, W. W. Norton

6. THE GRAIL BIRD: Hot on the Trail of the Ivory-Billed Woodpecker

By Tim Gallagher, Houghton Mifflin

7. ANIMALS IN TRANSLATION: Using the Mysteries of Autism to Decode Animal Behavior
By Temple Grandin and Catherine Johnson, Scribner

8. AMERICAN PROMETHEUS: The Triumph and Tragedy of J. Robert Oppenheimer
By Kai Bird and Martin J. Sherwin, Alfred A. Knopf

9. PERFECTLY REASONABLE DEVIATIONS FROM THE BEATEN TRACK: The Letters of
Richard P. Feynman
Edited by Michelle Feynman, Basic Books

10. TO SEE EVERY BIRD ON EARTH: A Father, a Son, and a Lifelong Obsession
By Dan Koeppel, Hudson Street Press

Source: Barnes & Noble Booksellers