



William Beebe (left) and Otis Barton show off their bathysphere in Bermuda after their record dive in 1934.

Tropical Research at the New York Zoological Society, had collected and identified creatures of the jungle; now he wanted to do the same with those of the ocean. Beebe had the cred, but Barton—who, after getting no response to his letters to Beebe, insinuated himself into the zoologist's presence one late December day in 1928—had the blueprint.

Daydreaming through engineering classes, Barton had come up with a design for a steel sphere thick enough to resist water pressure at great depths. Of course, it would need windows of some kind, an oxygen system, telephone contact, a spotlight, and a cable and winch to lower and raise it. To sweat the details, Barton hired the eminent shipbuilding firm of Cox and Stevens, which, after much trial, error, and subcontracting, turned over a finished product. In 1930, Barton carried it by tugboat to Nonsuch Island, Bermuda, where the Zoological Society staffed a research station. There Beebe waited on the *Ready*, a tug refitted with two winches to handle the three-ton cable.

Beebe christened the four-and-a-half-foot globe the "Bathysphere," using the Greek prefix for *deep*, and without further ceremony the *Ready*, towed by a barge, headed for deep water. Beebe and Barton squeezed inside the sphere and waited for the hatch cover to be tightened. Hampered by the forced intimacy, they watched through a tiny porthole as the Bathysphere lurched downward and the multicolored world darkened to a purplish blue. At

800 feet, Beebe began seeing what he'd been hoping for: weird, fierce, luminescent sea creatures no one had seen before. But a small leak and other glitches dictated a speedy end to the Bathysphere's maiden voyage.

Barton and Beebe continued to dive together intermittently for the next four years, with Beebe cataloging marine life in the deep and Barton attempting to film it. Yet never did collaboration evoke so little gratitude on either side. Beebe came to view Barton as a whiny dilettante; Barton saw Beebe as a publicity-hogging egotist. Shortly after a historic half-mile dive in 1934, the two men parted company and never spoke again. Barton made a movie

from his amateur underwater footage, *Titans of the Deep*, which flopped. He roamed the globe for another 60 years, backed by his trusty trust fund. Beebe left the ocean, frustrated by accusations that he hadn't really discovered any new deep-sea creatures, and went back to his beloved jungle.

Brad Matsen, an expert on marine and environmental topics who produced the National Geographic ocean series *The Shape of Life*, writes engagingly about the technical and scientific contributions of Barton and Beebe, as well as their personalities—and egos. The courage of these two explorers revealed the ocean floor, yet the terror of descent taught a larger truth as well: No man can conquer the sea.

—A. J. LOFTIN

WHY WE LIE:

The Evolutionary Roots of Deception and the Unconscious Mind.

By David Livingstone Smith.

St. Martin's Press. 238 pp. \$24.95

DECEPTION AT WORK:

Investigating and Countering Lies and Fraud Strategies.

By Michael J. Comer and

Timothy E. Stephens.

Gower Publishing. 459 pp. \$185

Whatever is alive is at peril. Whatever is alive must compete for food and a mate while protecting itself against predators.

Mendacity proves helpful in all three endeavors. But when lying occurs within the tribe, it weakens communal bonds and threatens the tribe's survival. That's why it must be punished by relentless prosecutors seeking perjury convictions.

Outside the tribe, lying remains the weapon of choice. Millions are spent on camouflage, false clues, misinformation, and double agents. We come by our talent for lying by evolutionary prescription. Our animal lineage reveals a densely woven fabric of trickery and dissimulation. Henry W. Bates, the Victorian naturalist, noticed that a butterfly with poor defenses against predators would imitate the coloration and movements of a nasty bully of a butterfly, one with better defenses. Similarly, the North American hognose, a nonpoisonous snake, takes on the coloration and appearance of a cobra when attacked and hisses violently, pretending to strike.

"If someone tells you he always tells the truth, you know you have a liar on your hands," Groucho Marx once said. In *Why We Lie*, David Livingstone Smith, a professor of philosophy at the University of New England, observes that we have inherited from our evolutionary ancestors not only the need to be able to lie convincingly, but also the need to detect others' lies. Better detection skills create the need for better liars. The result is a never-ending evolutionary arms race.

We all believe we have a lie detector between our ears. Judges commonly tell jurors to consider witnesses' demeanor in evaluating credibility. Did the witness appear to be telling the truth? Many studies, however, indicate that body language and manner of speech are poor guides for evaluating truthfulness. The scientific evidence, such as it is, suggests that judges who give the standard instruction are really misleading the jury.

Long before Darwin, the common law treated lying as inherent in human nature. The law prohibited litigants from taking the oath and testifying. It was presumed that they would lie. Even a defendant charged with first-degree murder, on trial for his life, couldn't testify. The religious view was that he had probably already

committed one crime and shouldn't be tempted to compound his Judgment Day problems by committing perjury. England began allowing defendants to testify in 1885. Marshall Hall, a prominent criminal defense barrister, had lobbied for the change in the law, but he came to regret his success. Under the earlier rule, the defense counsel could suggest to the jury what the defendant would have said if only his lips weren't sealed. Hall found that defendants' own stories were far less persuasive than his versions.

The CIA and other government agencies use the polygraph to catch liars, but most courts reject it. Judges believe there is too much subjectivity in interpreting the results. What if a device *could* detect falsehood with the scientific accuracy of DNA evidence? It would place great power in the hands of the enforcer, and induce great apprehension on the part of the enforcee. One's entire life would be at the disposal of the person with the truth machine. Would we want this?

Smith worries about self-deception, "the handmaiden of deceit." It helped us ascend the evolutionary ladder, he argues, but "it is no longer such a good option in a world stocked with nuclear and biological weapons. The problem is, we are stuck with it."

Deception at Work is a compilation of every known technique, fair and foul, for catching liars and getting them to confess. One recommendation is to lie to the suspect: Tell him his partner has confessed, or his fingerprints give him away. The book identifies two principal types of lies. The achievement lie, which is told to get a job or to defraud someone, often concerns the future, whereas the exculpatory lie seeks to conceal past wrongdoing. Alger Hiss, Richard Nixon, and Bill Clinton wanted to conceal what they had done, so they lied. Perjury cases are predicated on lies about the past.

All of us are playing the game of "as if," described by Hans Vaihinger in *The Philosophy of "As If"* (1924). We act as if this illusory world of the senses were in fact reality. We act as if we had free will and were responsible for what we do. We make

Current Books

plans as if we were not under a death sentence. It is by these fictions—shall we say, these lies—that we stride confidently into the future.

—JACOB STEIN

BIG COTTON:
How a Humble Fiber Created Fortunes, Wrecked Civilizations, and Put America on the Map.

By Stephen Yafa. Viking. 398 pp.
\$25.95

In his 14th-century bestseller *Voyage and Travels*, the English knight Sir John Mandeville described a half-animal, half-plant he called the “Vegetable Lamb.” Each pod on this amazing Scythian shrub, he wrote, contained a tiny lamb, and lint from the animals could be harvested and spun into a light fabric. For many Europeans, this fanciful account represented the first encounter with cotton, a crop that would transform their clothing, their working lives, and their place in the political world.

In *Big Cotton*, journalist Stephen Yafa traces the history of the plant and its products, beginning with the near-simultaneous domestication of wild cotton in Africa, South America, India, and Mexico around 3500 B.C. Cotton fabric woven in India was a luxury in ancient Greece and Rome, and in the 1660s a craze for Indian cotton chintz infected central and northern Europe. The popularity of the fabric helped drive the English invasion of India; the colonial government promptly outlawed the Indian manufacture of cotton fabric, requiring instead that raw domestic cotton be shipped to English mills. “By depriving India of the fruits of its own labor,” Yafa writes, “England all but guaranteed that the crop would one day come to symbol-

ize colonial subjugation and provide a rallying point against it.”

The overwhelming demand for cotton goods in Europe also spurred the development of the first factory system and, in the words of one contemporary admirer, forced “human beings to renounce their desultory work habits.” In the late 1700s, fear of industrial piracy was so intense that the British refused to let cotton mill workers leave the country. But American entrepreneurs eventually smuggled some secrets out and, with the help of Eli Whitney’s cotton gin (patented in 1794), launched a homegrown industry. The nation’s textile center of Lowell, Massachusetts, hired thousands of New England farm girls to work 14-hour days with little respite, and thereby planted the seeds of the labor movement.

Northern industrialists, dependent on Southern slave labor for raw materials, were latecomers to the cause of abolition, but by the end of the 1850s, Yafa writes, many were “no longer willing to pay for their conscience with their cotton.” For their part, many Southerners believed cotton exports would underwrite their ultimate independence. In the decades after the Civil War, farmers attempted to rebuild the devastated Southern cotton economy, but they were stymied by low



Workers open cotton bales at North Carolina’s White Oak Mill in the early 1900s—one of the few mill jobs available to blacks.