

NATURAL-BORN LIARS

David Livingstone Smith

David Livingstone Smith (b. 1954) grew up in southern Florida and received his master's degree from Antioch University and his Ph.D. from the University of London. He currently lives in Maine, where he is the director of the New England Institute for Cognitive Science and Evolutionary Psychology at the University of New England. He has directed the graduate program in psychotherapy and counseling at Regent's College in London, worked as a consultant to the national governments of Austria and the United Kingdom, and directed the clinical arm of a nonprofit organization that provides psychological support for inner-city children. Of his switch from these pursuits to getting a doctorate in philosophy, Smith says, "Philosophy gave me a way to integrate my childhood love of biology with my adult interest in the human mind by focusing on the deeper significance of evolutionary biology and how it can help us understand human nature." Smith says that because human nature is so complex, it must be approached from many perspectives and studied through many disciplines, from philosophy to evolutionary biology and cognitive science. He has written five books, most recently *Why We Lie: The Evolutionary Roots of Deception and the Unconscious Mind* (2004). The following article appeared in a 2005 issue of *Scientific American Mind*.

Deception runs like a red thread throughout all of human history. It sustains literature, from Homer's wily Odysseus to the biggest pop novels of today. Go to a movie, and odds are that the plot will revolve around deceit in some shape or form. Perhaps we find such stories so enthralling because lying pervades human life. Lying is a skill that wells up from deep within us, and we use it with abandon. As the great American observer Mark Twain wrote more than a century ago: "Everybody lies . . . every day, every hour, awake, asleep, in his dreams, in his joy, in his mourning. If he keeps his tongue still his hands, his feet, his eyes, his attitude will convey deception." Deceit is fundamental to the human condition.

Research supports Twain's conviction. One good example was a study conducted in 2002 by psychologist Robert S. Feldman of the University of Massachusetts Amherst. Feldman secretly videotaped students who were asked to talk with a stranger. He later had the students analyze their tapes and tally the number of lies they had told. A whopping 60 percent admitted to lying at least once during 10 minutes of conversation, and the group aver-

aged 2.9 untruths in that time period. The transgressions ranged from intentional exaggeration to flat-out fibs. Interestingly, men and women lied with equal frequency; however, Feldman found that women were more likely to lie to make the stranger feel good, whereas men lied most often to make themselves look better.

In another study a decade earlier by David Knox and Caroline Schacht, both now at East Carolina University, 92 percent of college students confessed that they had lied to a current or previous sexual partner, which left the husband-and-wife research team wondering whether the remaining 8 percent were lying. And whereas it has long been known that men are prone to lie about the number of their sexual conquests, recent research shows that women tend to underrepresent their degree of sexual experience. When asked to fill out questionnaires on personal sexual behavior and attitudes, women wired to a dummy polygraph machine reported having had twice as many lovers as those who were not, showing that the women who were not wired were less honest. It's all too ironic that the investigators had to deceive subjects to get them to tell the truth about their lies.

These references are just a few of the many examples of lying that pepper the scientific record. And yet research on deception is almost always focused on lying in the narrowest sense—literally saying things that aren't true. But our fetish extends far beyond verbal falsification. We lie by omission and through the subtleties of spin. We engage in myriad forms of non-verbal deception, too: we use makeup, hairpieces, cosmetic surgery, clothing, and other forms of adornment to disguise our true appearance, and we apply artificial fragrances to misrepresent our body odors. We cry crocodile tears, fake orgasms, and flash phony "have a nice day" smiles. Out-and-out verbal lies are just a small part of the vast tapestry of human deceit.

The obvious question raised by all of this accounting is: Why do we lie so readily? The answer: because it works. The *Homo sapiens* who are best able to lie have an edge over their counterparts in a relentless struggle for the reproductive success that drives the engine of evolution. As humans, we must fit into a close-knit social system to succeed, yet our primary aim is still to look out for ourselves above all others. Lying helps. And lying to ourselves—a talent built into our brains—helps us accept our fraudulent behavior.

Passport to Success

If this bald truth makes any one of us feel uncomfortable, we can take some solace in knowing we are not the only species to exploit the lie. Plants and animals communicate with one another by sounds, ritualistic displays, colors, airborne chemicals, and other methods, and biologists once naively assumed that the sole function of these communication systems was to transmit accurate information. But the more we have learned, the more



The Padded Résumé

Lying goes far beyond spoken words; we exaggerate, falsify, flatter, and manipulate in many ways.

obvious it has become that nonhuman species put a lot of effort into sending *inaccurate* messages.

The mirror orchid, for example, displays beautiful blue blossoms that are dead ringers for female wasps. The flower also manufactures a chemical cocktail that simulates the pheromones released by females to attract mates. These visual and olfactory cues keep hapless male wasps on the flower long enough to ensure that a hefty load of pollen is clinging to their bodies by the time they fly off to try their luck with another orchid in disguise. Of course, the orchid does not "intend" to deceive the wasp. Its fakery is built into its physical design, because over the course of history plants that had this capability were more readily able to pass on their genes than those that did not. Other creatures deploy equally deceptive strategies. When approached by an erstwhile predator, the harmless hog-nosed snake flattens its head, spreads out a cobra-like hood, and, hissing menacingly, pretends to strike with maniacal aggression, all the while keeping its mouth discreetly closed.

These cases and others show that nature favors deception because it provides survival advantages. The tricks become increasingly sophisticated the closer we get to *Homo sapiens* on the evolutionary chain. Consider an incident between Mel and Paul:

Mel dug furiously with her bare hands to extract the large succulent corm from the rock-hard Ethiopian ground. It was the dry season and food was scarce. Corms are edible bulbs somewhat like

onions and are a staple during these long, hard months. Little Paul sat nearby and surreptitiously observed Mel's labors. Paul's mother was out of sight; she had left him to play in the grass, but he knew she would remain within earshot in case he needed her. Just as Mel managed, with a final pull, to yank her prize out of the earth, Paul let out an ear-splitting cry that shattered the peace of the savannah. His mother rushed to him. Heart pounding and adrenaline pumping, she burst upon the scene and quickly sized up the situation: Mel had obviously harassed her darling child. Shrieking, she stormed after the bewildered Mel, who dropped the corm and fled. Paul's scheme was complete. After a furtive glance to make sure nobody was looking, he scurried over to the corm, picked up his prize, and began to eat. The trick worked so well that he used it several more times before anyone wised up.

The actors in this real-life drama were not people. They were Chacma baboons, described in a 1987 article by primatologists Richard W. Byrne and Andrew Whiten of the University of St. Andrews in Scotland for *New Scientist* magazine and later recounted in Byrne's 1995 book *The Thinking Ape* (Oxford University Press). In 1983 Byrne and Whiten began noticing

THE LIE OF HAPPINESS

Lying to ourselves may be one way of maintaining our mental health. Several classic studies indicate that moderately depressed people actually deceive themselves less than so-called normal folks. Lauren B. Alloy of Temple University and Lyn Y. Abramson of the University of Wisconsin-Madison unveiled this trend by clandestinely manipulating the outcome of a series of games. Healthy subjects who participated in the games were inclined to take credit when they won the rigged games and also typically underestimated their contributions to the outcome when they did poorly.

Depressed subjects, however, evaluated their contributions much more accurately. In another study, psychologist Peter M. Lewinsohn, professor emeritus at the University of Oregon, showed that depressives judge other people's attitudes toward them far more accurately than nondepressed subjects. Furthermore, this ability actually degenerates as the psychological symptoms of depression lift in response to treatment.

Perhaps mental health rests on self-deception, and becoming depressed is based on an impairment of the ability to deceive oneself. After all, we are all going to die, all of our loved ones are going to die, and a great deal of the world lives in abject misery. These are hardly reasons to be happy!

— D. L. S.



The Fake Smile

(Appearance: That was a funny story, boss.)

(Agenda: Give us that raise.)

deceptive tactics among the mountain baboons in Drakensbeg, South Africa. Catarrhine primates, the group that includes the Old World monkeys, apes, and ourselves, are all able to tactically dupe members of their own species. The deceptiveness is not built into their appearance, as with the mirror orchid, nor is it encapsulated in rigid behavioral routines like those of the hog-nosed snake. The primates' repertoires are calculated, flexible, and exquisitely sensitive to shifting social contexts.

Byrne and Whiten catalogued many such observations, and these became the basis for their celebrated Machiavellian intelligence hypothesis, which states that the extraordinary explosion of intelligence in primate evolution was prompted by the need to master ever more sophisticated forms of social trickery and manipulation. Primates had to get smart to keep up with the snowballing development of social gamesmanship.

The Machiavellian intelligence hypothesis suggests that social complexity propelled our ancestors to become progressively more intelligent and increasingly adept at wheeling, dealing, bluffing, and conniving. That means human beings are natural-born liars. And in line with other evolutionary trends, our talent for dissembling dwarfs that of our nearest relatives by several orders of magnitude.

The complex choreography of social gamesmanship remains central to our lives today. The best deceivers continue to reap advantages denied to their more honest or less competent peers. Lying helps us facilitate social interactions, manipulate others, and make friends.



The Thumbs-Up

(Appearance: Great to see you. You're the best.)

(Agenda: Pick me for that VP job.)

There is even a correlation between social popularity and deceptive skill. We falsify our résumés to get jobs, plagiarize essays to boost grade-point averages, and pull the wool over the eyes of potential sexual partners to lure them into bed. Research shows that liars are often better able to get jobs and attract members of the opposite sex into relationships. Several years later Feldman demonstrated that the adolescents who are most popular in their schools are also better at fooling their peers. Lying continues to work. Although it would be self-defeating to lie all the time (remember the fate of the boy who cried, "Wolf"), lying often and well remains a passport to social, professional, and economic success.

Fooling Ourselves

Ironically, the primary reasons we are so good at lying to others is that we are good at lying to ourselves. There is a strange asymmetry in how we apportion dishonesty. Although we are often ready to accuse others of deceiving us, we are astonishingly oblivious to our own duplicity. Experiences of being a victim of deception are burned indelibly into our memories, but our own prevarications slip off our tongues so that we often do not notice them for what they are.

The strange phenomenon of self-deception has perplexed philosophers and psychologists for more than 2,000 years. On the face of it, the idea that

a person can con oneself seems as nonsensical as cheating at solitaire or embezzling from one's own bank account. But the paradoxical character of self-deception flows from the idea, formalized by French polymath René Descartes in the seventeenth century, that human minds are transparent to their owners and that introspection yields an accurate understanding of our own mental life. As natural as this perspective is to most of us, it turns out to be deeply misguided.

If we hope to understand self-deception, we need to draw on a more scientifically sound conception of how the mind works. The brain comprises a number of functional systems. The system responsible for cognition—the thinking part brain—is somewhat distinct from the system that produces conscious experiences. The relation between the two systems can be thought similar to the relation between the processor and monitor of a personal computer. The work takes place in the processor; the monitor does nothing but display information the processor transfers to it. By the same token, the brain's five systems do the thinking, whereas consciousness displays the information that it has received. Consciousness plays a less important role in cognition than previously expected.

This general picture is supported by a great deal of experimental evidence. Some of the most remarkable and widely discussed studies were conducted several decades ago by neuroscientist Benjamin Libet, now professor emeritus at the University of California at San Diego. In one experiment, Libet placed subjects in front of a button and a rapidly moving clock and asked them to press the button whenever they wished and to note the time, as displayed on the clock, the moment they felt an impulse to press the button. Libet also attached electrodes over the motor cortex, which controls movement, in each of his subjects to monitor the electrical tension that mounts as the brain prepares to initiate an action. He found that our brains begin to prepare action just over a third of a second *before we consciously decide to act*. In other words, despite appearances, it is not the conscious

BIG-BRAINED BAMBOOZLERS

Homo sapiens have big brains. So do our relatives, the monkeys and apes. Normally, brain size among species rises with increasing body size and metabolic intake, but according to this formula, monkeys and apes have the brain volume of creatures twice as large. Most of the enlargement comes from massive development of the neocortex. A 2004 study by Richard W. Byrne and Nadia Corp of the University of St. Andrews in Scotland shows that the use of deception by primate species rises with neocortical volume. That is, the members of species with the beefiest brains are the most inclined to deceive one another. Human brain size, of course, outranks all other on the body-size chart.

— D. L. S.

mind that decides to perform an action: the decision is made unconsciously. Although our consciousness likes to take the credit (so to speak), it is merely informed of unconscious decisions after the fact. This study and others like it suggest that we are systematically deluded about the role consciousness plays in our lives. Strange as it may seem, consciousness may not do anything except display the results of unconscious cognition.

This general model of the mind, supported by various experiments beyond Libet's, gives us exactly what we need to resolve the paradox of self-deception—at least in theory. We are able to deceive ourselves by invoking the equivalent of a cognitive filter between unconscious cognition and conscious awareness. The filter preempts information before it reaches consciousness, preventing selected thoughts from proliferating along the neural pathways to awareness.

Solving the Pinocchio Problem

But why would we filter information? Considered from a biological perspective, this notion presents a problem. The idea that we have an evolved tendency to *deprive* ourselves of information sounds wildly implausible, self-defeating, and biologically disadvantageous. But once again we can find a clue from Mark Twain, who bequeathed to us an amazingly insightful explanation. "When a person cannot deceive himself," he wrote, "the chances are against his being able to deceive other people." Self-deception is advantageous because it helps us lie to others more convincingly. Concealing the truth from ourselves conceals it from others.

In the early 1970s biologist Robert L. Trivers, now at Rutgers University, put scientific flesh on Twain's insight. Trivers made the case that our flair for self-deception might be a solution to an adaptive problem that repeatedly faced ancestral humans when they attempted to deceive one another. Deception can be a risky business. In the tribal, hunter-gatherer bands that were presumably the standard social environment in which our hominid ancestors lived, being caught red-handed in an act of deception could result in social ostracism or banishment from the community, to become hyena bait. Because our ancestors were socially savvy, highly intelligent primates, there came a point when they became aware of these dangers and learned to be self-conscious liars.

This awareness created a brand-new problem. Uncomfortable, jittery liars are bad liars. Like Pinocchio, they give themselves away by involuntary, nonverbal behaviors. A good deal of experimental evidence indicates that humans are remarkably adept at making inferences about one another's mental states on the basis of even minimal exposure to nonverbal information. As Freud once commented, "No mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore." In an effort, to quell our rising anxiety, we may automatically raise the pitch of our voice, blush, break out into the proverbial cold sweat,



The Come-On
 "You're the sexiest woman at this party."
 (Agenda: Come home with me tonight.)

scratch our nose, or make small movements with our feet as though barely squelching an impulse to flee.

Alternatively, we may attempt to rigidly control the tone of our voice and, in an effort to suppress telltale stray movements, raise suspicion by our stiff, wooden bearing. In any case, we sabotage our own efforts to deceive. Nowadays a used-car salesman can hide his shifty eyes behind dark sunglasses, but this cover was not available during the Pleistocene epoch. Some other solution was required.

Natural selection appears to have cracked the Pinocchio problem by endowing us with the ability to lie to ourselves. Fooling ourselves allows us to selfishly manipulate others around us while remaining conveniently innocent of our own shady agendas.

If this is right, self-deception took root in the human mind as a tool for social manipulation. As Trivers noted, biologists propose that the overriding function of self-deception is the more fluid acceptance of others. Self-deception helps us ensnare other people more effectively. It enables us to lie sincerely, to lie without knowing that we are lying. There is no longer any need to put on an act, to pretend that we are telling the truth. Indeed, a self-deceived person is actually telling the truth to the best of his or her knowledge, and believing one's own story makes it all the more persuasive.

Although Trivers's thesis is difficult to test, it has gained wide currency as the only biologically realistic explanation of self-deception as an adap-

tive feature of the human mind. The view also fits very well with a good deal of work on the evolutionary roots of social behavior that has been supported empirically.

Of course, self-deception is not always so absolute. We are sometimes aware that we are willing dupes in our own con game, stubbornly refusing to explicitly articulate to ourselves just what we are up to. We know that the stories we tell ourselves do not jibe with our behavior, or they fail to mesh with physical signs such as a thumping heart or sweaty palms that betray our emotional states. For example, the students described earlier, who admitted their lies when watching themselves on videotape, knew they were lying at times, and most likely they did not stop themselves because they were not disturbed by this behavior.

BETTER POLYGRAPHS

Although advocates of the polygraph claim an accuracy rate around 90 percent, many critics say that despite its "lie detector" moniker, the machine does not really spot falsehoods. Its electrodes, arranged in various places on a subject's body, measure physiological signs of stress, such as elevated heart rate and blood pressure. These do often accompany lying, but if a person can lie calmly he or she stands a good chance of beating the polygraph. Conversely, a truth-telling individual who is anxious about the procedure can elicit a false positive reading.

Scientists are working on a new breed of lie detectors that zeros in on lying itself. For example, neuroscientist Lawrence A. Farwell of Brain Fingerprinting Laboratories has developed a method of the same name. A subject wears a helmet of electrodes that produces an electroencephalogram (EEG)—a record of electrical changes in the brain. By monitoring neural activity this way, Farwell claims he can detect dishonesty with nearly 100 percent accuracy. The method relies on telltale signs of visual recognition in the brain. For example, a suspect who is shown a murder weapon may say that he has never seen it before, but his brain, Farwell maintains, will generate a wave called P300 that automatically occurs when we recognize an object.

Another approach is being pioneered by psychologist Stephen M. Kosslyn of Harvard University. Kosslyn uses imaging technologies to study what the brain does when we lie. His findings indicate that lying is associated with greater brain activity than truth telling and that activity in certain areas of the brain is associated with distinct kinds of lies.

Although these methods and others remain controversial, it is most likely that the next decade will give investigators unprecedented access to the secret recesses of our minds—for good or for ill.

—D.L.S.



The Forced Cry
 (Appearance: You hurt my feelings.)
 (Agenda: Take me out for a lavish evening,
 and I might forgive you.)

At other times, however, we are happily unaware that we are pulling the wool over our own eyes. A biological perspective helps us understand why the cognitive gears of self-deception engage so smoothly and silently. They cleverly and imperceptibly embroil us in performances that are so skillfully crafted that the act gives every indication of complete sincerity, even to the actors themselves.

Further Reading

- "On the Decay of the Art of Lying." Mark Twain in *The Stolen White Elephant, Etc.* James R. Osgood and Company, 1882.
- "The Thinking Primate's Guide to Deception." Richard W. Byrne and Andrew A. Whiten in *New Scientist*, No. 1589, pages 54–57; December 3, 1987.
- "Who Lies?" Deborah A. Kashy and Bella M. DePaulo in *Journal of Personality and Social Psychology*, Vol. 70, No. 5, pages 1037–1051; 1996.
- *Natural Selection and Social Theory: Selected Papers of Robert Trivers*. Robert Trivers. Oxford University Press, 2002.

QUESTIONS

1. Why, according to Smith, do we lie? Do you agree with Smith's claim that "[d]eception is fundamental to the human condition (paragraph 1)?"
2. Smith claims that "nature favors deception" (paragraph 8). What evidence does he provide to support this claim? Do you find his evidence persuasive?
3. Why, according to Smith, is self-deception advantageous? Why does self-deception help us lie?
4. How does a biological perspective help us understand self-deception as an adaptive feature of the human mind?
5. Interview ten friends about the type of lies they tell. What patterns do you uncover about the type of lies your friends tell? What hypotheses might you develop to explain these lies? Write a report in which you present the findings of your research.
6. "[T]he primary reason we are so good at lying to others is that we are good at lying to ourselves," writes Smith in paragraph 14. Do you agree or disagree with this statement? What questions do this statement and Smith's article raise for you? Write a response to Smith.

MAKING CONNECTIONS

Both Smith and Malcolm Gladwell, in "The Naked Face" (p. 519), deal with the ways we determine the intentions of others based on our observations of them. What conclusions do Smith and Gladwell agree on? In what ways do their conclusions differ?