

To Tell the Truth

Although DISCOVER generally publishes only short letters or excerpts from them, we make an exception in the following case because of its unusually compelling subject matter.

That there is a machine or a "test" that can detect lying is one of the great American myths. For nearly ten years I have been trying to explode this myth. In 1986 alone, a million of my countrymen had to submit to lie tests. Thousands of them were refused employment, many others lost their jobs and reputations. Some went to prison convicted of crimes they did not commit.

I have enjoyed the edifying essays of Lewis Thomas, a man of science, culture, and manifest good sense. What, then, am I to do when I find Thomas ruminating on the sociobiological implications of the lie detector myth [December], which he treats as fact, "propped up," he says, "by genuine, hard scientific data"? To tell a lie, "even a small one," he reports, sets off "a highly reproducible cascade of changes in the electrical conductivity of the skin, the heart rate, and the manner of breathing... and now we have a neat machine to record it as well."

One is dismayed to see the very essence of the myth thus dignified by the elegant prose of a respected scientist-philosopher. I had assumed that we Americans were uniquely vulnerable to this myth because we are such suckers for technology and what masquerades as scientific; I had supposed that scientists would be less easily taken in. I see now that the problem goes deeper; Americans are suckers, period.

There is no such thing as a lie detector. Lying does not produce a "reproducible cascade" of distinctive physiological changes. There is no specific response that everyone emits when lying but never when telling the truth. When we lie about something serious, most of us experience some sort of inner turmoil, what Daniel Defoe described 256 years ago as "a tremor in the blood." No doubt we remember thinking that, if the target of our falsehood could only see that turmoil within us, the jig would be up. When the polygrapher adjusts the chest belt that measures breathing movements, attaches the electrodes that will record the sweating of the palms, and then pumps up the blood pressure cuff on our arm, we readily believe the jig is up.

What we forget is that a false accusation can elicit an inner turmoil also—

and the lie detector cannot tell the difference! The polygraph pens do no special dance when we are lying. Many polygraphers think that they can see "deception" in the choreography but they are mistaken. Most of the thousands of polygraph examiners in the U.S. are ex-cops, graduates of a six-week course that covers psychology, physiology, electronics, and "the art and science of the polygraph technique," a course using a syllabus that would make Dr. Thomas blush. If we really want to understand the lie detector, we would do better to consult Floyd Fay, a young man who was recently released from prison after serving more than two years of a life sentence for a murder he did not commit (they finally found the real killers).

Fay was arrested at home at 4 o'clock one morning and hauled off to the Toledo jail to be grilled about the murder of his friend Fred. Because he was innocent, Fay agreed to take a lie detector test. He was asked a short list of questions repeated several times. There

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were three relevant, or "Did you do it?" questions, such as "Did you kill Fred?" interspersed with three control questions, such as "Before you were twenty-four, did you ever think of doing bodily harm to someone for revenge?" If Fay had been consistently more aroused or disturbed by the control questions than by the relevant questions, he would have passed the test and been set free. But, not surprisingly, Fay's pulse was stronger and his palms were more moist when he was asked the relevant questions, no doubt because he was sensible enough to realize that "Did you shoot Fred on March 28th?" was considerably more "relevant" to his immediate prospects than those so-called control questions about his thoughts and actions years earlier.

This type of lie test has become standard in the industry precisely because the polygraph measures only relative disturbance or arousal and cannot detect lying per se. But because the control questions are not controls at all in the scientific sense of that term, the

polygraph test is strongly biased against the truthful respondent. Put yourself in Fay's place: you didn't kill anyone, your denials are truthful. But the authorities suspect you may be guilty; that is why you are being given the test. When the man asks, "Did you kill Fred?" what would happen to the surging of your pulse, the sweating of your palms?

Fay wound up in a prison where they use the polygraph on inmates who have violated prison rules. Those who fail the test are usually transferred to the maximum security prison, a dangerous and punishing place. Because of what had happened to him, Fay began a study of the law and the lie detector. From an article of mine, he learned how the control question test is supposed to work—and also how it can be beaten. It is not easy to inhibit one's reactions to the accusatory relevant questions. It is quite easy, however, to augment artificially one's reactions to the control questions, and, if the pens dance harder after the control than the relevant questions, you must pass the test. Fay contacted 27 inmates who were scheduled to undergo such a trial by polygraph. He explained the technique to them, showed them how to bite their tongues or secrete a nail in one of their shoes and press on the sharp edge of the nailhead when the control questions were asked. Although all 27 admitted to him that they were guilty of the offenses charged, mostly involving drugs, 23 of the 27 managed to beat the lie test in this manner.

The "hard scientific data" that Dr. Thomas refers to are, I fear, also mythological. For 50 years the lie detector wormed its way into our confidence largely on the basis of extreme and unsubstantiated claims of 95 per cent and 99 per cent accuracy. There are some hard data now, two studies published since 1976 that prove what Fay and thousands of other victims have discovered to their cost: submitting to the lie detector to prove one's innocence is a hazardous expedient. In both these recent investigations, of the suspects who were determined later to have been innocent, half of them failed the lie test!

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