



Watch What You're Thinking! *The Skeptic's Toolbox II Conference*

STEVEN GOLDSTEIN

There are three colored balls on the table in front of you. One red, one yellow, one green. The man with the dark hair and the dark, penetrating eyes standing behind the table stares at you intently—so intently, in fact, that for a brief instant you find yourself wondering whether he is actually trying to read your mind. Still looking right at you, he boldly says that he knows which ball you are about to select. You know this is impossible, of course, and yet that conviction seems to waver ever so slightly as you watch him confidently jot down a prediction on a slip of paper and place it aside. He looks back at you, and as you find yourself trying to somehow mentally resist the man's powers, you are shocked to find that the ball you subsequently select is indeed the one he predicted you would.

So began CSICOP's second Skeptic's Toolbox conference, in Eugene, Oregon. The above demonstration—along with other feats of mental wizardry—was performed as part of the kick-off dinner by Bob Fellows, a professional mentalist and consultant on mind-control techniques.

We all recognize this demonstration as a simple magic trick, of course, even though we might not know how it is done. And yet, as Fellows pointed out, the effect of such

tricks on audiences who are prepared to believe them real can be enormously powerful. And, when deceit is involved, they can be potentially very harmful as well.

It is because of this duality—the surface simplicity of psychological manipulation and the power of the effect—that this little parlor trick served as a metaphor during the entire conference for the many ways that people are able to deceive others—sometimes unintentionally, but often with purpose, and often to devastating consequences.

The Case for Cases

Organized by Ray Hyman, CSICOP Fellow and professor of psychology at the University of Oregon, and Barry Karr, executive director of CSICOP, the five-day Skeptic's Toolbox conference held August 19-23, 1993, built on the successes of a similar workshop held in Eugene the previous year (*SI*, Winter 1993). Much like the earlier conference, the objective of the 1993 session was to help skeptics add to their arsenal of tools and techniques with which to both guard against deception and properly evaluate paranormal claims.

To that end, the conference was structured on the premise of *case-based*

reasoning, in which participants were presented with a small set of prototypical problems and their solutions. Characteristics of these cases could then be matched to new problems, either suggesting similar paths toward resolutions or adding to a databank of new prototypes and situations.

As Hyman pointed out, the benefit of the case-based approach is that concrete examples are used to build good models as a first step toward extracting broad principles. This can make the learning experience much more meaningful than if critical thinking skills alone were taught, without the benefit of context.

A horse is a horse, of course? The case of Clever Hans as an investigation of animal intelligence is well documented; the claim was that the horse Hans, after having a mathematical or word problem spoken to him by his owner, would be able to correctly tap out the answer with his hoof. Many experts at the time—police officers, scientists, and animal experts in turn-of-the-century Germany—saw Hans in action and were convinced that his intelligence was genuine.

What is not so well known or appreciated about this case is the extent of the investigation undertaken to examine this claim. Ray Hyman, who led the session, told how Oskar Pfungst went beyond simply demonstrating that the horse possessed no academic abilities. Pfungst not only identified the exact cues that guided the horse but also conducted a variety of experiments to ultimately understand completely every aspect of the case. The result was a debunking so thorough that today, almost a hundred years later, it is still believed by many to be the best example of a skeptical investigation in history.

"He went kinda paranormal on me." That's how Jerry Andrus—magician, iconoclast, and perhaps the world's

foremost inventor of amazing optical illusions—described the reaction of an otherwise rational observer who began to express belief in his dowsing demonstration. Indeed, when viewing Andrus's mind-bending illusions, many of which were on display at the conference, it is sometimes tempting to seek such "extra-normal" explanations. How else to explain the Trizonal Space Warp, for example, a spinning set of patterns that do weird things to one's sense of sight? Or two oversized metallic-like nuts, connected in such a way that a solid, straight rod is seen to bend in order to go through them?

To Andrus, the point of demonstrating these illusions is not merely to show that we can be easily fooled because "things are not always what they seem." Rather, it is to appreciate that the human mind is in fact working correctly in these instances, and to help us understand the circumstances in which this knowledge is important. We look at a car parked on the street and, without thinking about it, we assume that the part of the car we *can't* see is there, too; our brains *have* to do this so that we can make sense of the world around us. And yet, when we see two people of differing heights standing facing each other on a level plank, and then *change heights* by simply changing places, we find it valuable to ask whether our eyes are playing tricks on us. (The explanation of this illusion appeared in the Spring 1994 *SI*.) As Andrus often proclaims, we sometimes "come to the wrong conclusions for the right reasons."

When the write stuff is wrong. Can one's handwriting reliably say anything about oneself? Can it be used to make decisions on hiring, career choice, marital compatibility, or honesty? What claims do the practitioners of handwriting analysis make?

These were some of the questions

explored in the session on graphology, led by Barry Beyerstein, professor of psychology at Simon Fraser University (Vancouver, B.C.) and a member of CSICOP's Executive Council. Beyerstein pointed out that graphology is much more widely used in Europe than in the United States; in France, in fact, job seekers are virtually disqualified from hiring consideration if they submit a letter that is typed or computer-generated, as opposed to handwritten.

Beyerstein approached his examination of graphology with scientific questions: "Is there sufficient information in handwriting to allow reliable measurement of personality, aptitude, or health?" for example. And practical questions: "Is graphology justified in influencing lifestyle decisions?" "Does a graphologist need to be trained?" and so on. In all cases, the results showed that as a "divinatory art," graphology is nothing more than a warm, fuzzy brand of sympathetic magic.

Like astrology, graphology seems to rest on the notion of "pareidolia": the human infusion of patterns or meaning on random audio or visual events. In the case of handwriting analysis, this might be the idea that writers of large capital I's are egotistical, or those having varying slants are unpredictable.

Graphology as a discipline? Beyerstein found numerous objections: the lack of standardization in training; lack of commitment to research; absence of links with other relevant disciplines; a tendency to self-publish rather than submit results to refereed journals;



Jerry Andrus amazes Skeptic's Toolbox II seminar attendee with one of his illusions.

and a distinct dearth of progress in the field. All of which gives pause, granted the rising popularity of this phenomenon.

Thinking About Thinking

The workshop also offered sessions with more general topics:

Being fooled. This session was conducted by all five members of the conference faculty. Each related accounts and experiences of how humans are deceived. Ray Hyman noted that with few exceptions the field has been little studied since 1900. One reason may be that deception is difficult to classify, precisely because such attempts at structure are rarely flexible enough to accommodate new changing paradigms.

One example involves optical illusions. Hyman pointed out that, while psychologists like to explain phenomena in terms of a single cause, deception in general is caused by many factors, operating at many different levels. Among the reasons people are fooled, he said, are cognitive limits to perception, a distortion of the representation of knowledge, and the power of a particular social situation.

Social factors can contribute heavily to the persuasive influence of a presentation, Bob Fellows pointed out. In the 3-card monte street con, for example, the skill of the operator is less important than the psychological environment created by the shills. Similarly, the secret of Uri Geller is not how he bends keys, but how, as Hyman pointed out, he "bends minds."

From such scenarios, and others, we may extrapolate "demand characteristics" that play a part in the ease with which people can be manipulated: the expectation that people are supposed to answer questions in a telephone interview, for instance; the notion that guests do not complain; the idea that true believers believe; and the feeling that experts must know the truth. Once again we are reminded, Fellows noted, that we need to be careful when placing authority outside ourselves.

The special case of parapsychology. Led by Ray Hyman, this discussion centered around the fact that parapsychology, as distinct from other paranormal activities, is essentially a scientific enterprise. Its practitioners are serious scientific researchers, often at the Ph.D. level, and most are trained in the disciplines of statistics and experimental design.

Hyman sketched a brief history of the field, beginning with the formation of the Society for Psychical Research in the 1880s, through J. B. Rhine's Parapsychological Society of

America in the 1930s (and continuing today), to the current status of the ganzfeld experiments, which are touted by the parapsychological community as being the most promising development in the field.

The problem with most parapsychologists, noted Hyman, is that after the dust settles on an argument they still have hope that "something is there." A skeptic's position, on the other hand, is not anti-psi; it's agnostic. A skeptic's "belief" is that a claim has a normal explanation.

Hyman noted that there have been several prominent parapsychological researchers—Charles Akers and Susan Blackmore, to name two—who have left the fold after finding no results, often after having devoted many years of serious study to the cause. Unlike these few, however, many remain committed, not necessarily to scientific inquiry, but to their own agendas. Hyman related the comment of a colleague: "If parapsychologists had been doing their jobs responsibly, there never would have been a need for CSICOP."

The esoteric brain. "A sudden, usually unexpected alteration of consciousness so intense as to be overwhelming"—this definition of *transcendence* was a central theme in this session, on the inner workings of the brain, led by Barry Beyerstein.

Beyerstein outlined the ways that different psychological states—and their corresponding brain functions—can account for intense personal experiences, such as out-of-body episodes. For example, certain transcendent experiences can be caused by the abnormal brain states associated with various medical conditions, such as epilepsy, schizophrenia, and Tourette's Syndrome. Similarly, discipline-induced causes, such as deep meditation, hypnosis, ritualistic chanting, and self-mutilation rites, can

also produce transcendence. Even "normal" arousal phenomena—sleep or sensory deprivation, fatigue, fasting, or emotional trauma and injury—may be responsible for altered states.

Beyerstein also identified the part of the brain in which these activities have been isolated. The limbic system, responsible for the mind's emotional modeling of reality, has been shown to be the primary area for the "electrical short-circuiting" that is often associated with the states mentioned above. All of which supports the millennia-old notion of that old country doctor, Hippocrates, who first postulated that it is indeed the brain that is the originator of all emotions and experiences.

Getting the message across. Bob Fellows offered some insight into the communications process and how skeptics can be more effective in making an argument. People on different sides of a discussion, he said, may think equally well, but may have different premises. Motivational speakers are aware of this and will try to change their subjects' premises.

In one-on-one situations, skeptics need to keep an open mind and practice active listening to decode what a person says. It is also helpful to make "I" statements when describing a behavior or feeling ("I'm not comfortable with that") and not to condescend or to humor the believer.

In presenting to larger groups, it's important to personalize a topic and to try to invest it with some originality. Following the guidelines of good story-telling is

also good advice: know what your point of view is, make your story human, and give it a structure, such as raising a question, repeating the premise, and resolving the issues.

The Case for Tools

The conference wrapped up with some final thoughts on the cases and how to apply them. This included a discussion of the difference between skeptics and believers and ways to improve communication between the two. Whereas skeptics search for truths, believers tend to want validation of their experiences. But while skeptics are usually advocates for *general* themes and ideas, such as clear thinking, open-mindedness, and education, they ask believers to give up something specific when trying to make a case. It is for



Ray Hyman demonstrates dowsing at seminar.

reasons like this that a solid toolbox of skeptical principles and communication techniques can be extremely valuable.

Steven Goldstein is an advertising copywriter and a member of the Bay Area Skeptics. Address: 525 Brennan St., Suite 205, San Francisco, CA 94107.

□ *Two New Fellows Elected to CSICOP*

Two more scientists have recently been elected Fellows of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP):

- Thomas Gilovich, associate professor of psychology, Cornell University. His research and teaching interests include sources of erroneous beliefs, cognitive illusions, misperceptions of randomness, and social judgment. He is the author of *How We Know What Isn't So: The Fallibility of Human Reason in Everyday Life*.
- Jill Cornell Tarter, Senior Research Scientist, the SETI Institute, Mountain View, Calif. She is an astronomer and a leading researcher in the search for extraterrestrial intelligence. She is currently project scientist for Project Phoenix. This is the

new privately funded SETI program born out of the ashes of the recently canceled NASA High Resolution Microwave Survey (previously known as SETI), for which she was also project scientist. She has received two NASA Public Service Medals.

In addition, we welcome a newly elected Technical Consultant of CSICOP.

- Michael R. Dennett, writer and investigator, Federal Way, Washington. He has long been active in examining claims of Bigfoot creatures, psychics, UFOs, and so on. He's a contributor to the newly published *Psychic Sleuths* (Prometheus Books). His work has frequently appeared in the SKEPTICAL INQUIRER. □