

Is mankind on the verge of an
evolutionary takeoff
into new realms of expanded
consciousness and psychic energy?

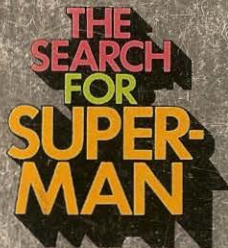
To answer this question, a former science writer
for *Time Magazine* takes a hard look at the
world's most famous psychic, Uri Geller,
the charismatic young Israeli
who bends rings, alters magnetic fields,
and breaks spoons by using his
astounding psychic powers.

In the first unbiased eyewitness account,
John L. Wilhelm goes into the laboratories
of the Stanford Research Institute and
describes the program led by
former astronaut Edgar Mitchell.

He explains how psychics are tested
under scientific conditions and reports amazing
paranormal events as researchers work also with
Ingo Swann and Pat Price.

Wilhelm describes an astonishing
experiment with Swann,
who performed a feat impossible
by the narrow laws of technological science.

For skeptic and believer alike,
this exploration of the psychic potential of human
beings will be a mind-bending experience.



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THE SEARCH FOR SUPERMAN

John L. Wilhelm

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THE SEARCH FOR SUPER- MAN

An extraordinary journey of
psychic exploration

Eyewitness account of the
paranormal powers of

URI GELLER
INGO SWANN
PAT PRICE

by John L. Wilhelm

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THE SEARCH FOR SUPERMAN

by John L. Wilhelm

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THE SEARCH FOR SUPERMAN

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For my parents
John and Betty Wilhelm
with love

It is part of the scientist—of the intelligent and honest man of letters and honest clergyman as well—to entertain heretical and forbidden opinions experimentally, even if he is finally to reject them. Moreover, this rejection must not be taken for granted at the beginning and merely constitute an empty spiritual exercise, understood from the start to be no more than a game in which one engages to show one's spiritual open-mindedness. It is a serious exercise, and should be undertaken in all earnestness: it is only when it involves a real risk of heresy that there is any point to it; and if heresy involves a risk of spiritual damnation, then this risk must be undertaken honestly and courageously.

—Norbert Wiener, *God and Golem, Inc.*

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*An 8-page photo insert
appears near the center of the book.*

INTRODUCTION

THE PURPOSE OF THIS BOOK IS TO PRESENT THE FACTS AS best they can be determined in the controversial psychic experiments carried out over the past several years by Stanford Research Institute (SRI).

My intent neither is to prove nor disprove the widely disputed claims for the existence of paranormal phenomena. Rather, it is an inquiry into the specifics of such claims, specifics generated and given focus by the extraordinary research being carried out by one of this country's prominent investigative institutions.

SRI's experiments center on three men alleged to have exceptional paranormal talents: the ability to bend metals; to disrupt the functioning of the finest scientific instruments; to "see" distant actions as they are happening—all by unknown powers of the mind. In the fullest sense of Norbert Wiener's dictum, the experiments are heretical. They aggressively challenge the central dogmas of canonical science, even to the point of risking spiritual damnation.

The psychic experimentation at SRI continues to this day, still controversial, still largely under the shroud of secrecy that has obscured it from the beginning. This secrecy stems partly from the fact that some of the experiments are funded by the United States government.

I make no claims for definitiveness. Assistance by the principals was given grudgingly, if at all. I have had no special access to SRI's results, the majority of which continues to remain hidden inside their "top secret" vaults. I was not allowed to witness any of their psychic tests. As a consequence, I suffer, like most journalists, from the in-

tractable affliction of subpoena envy. Nevertheless, I have tried to minimize the use of secondhand reports. On occasion, I have speculated and labeled such suggestions for what they are—paths to explore, not highways to set in concrete.

Most scientists—publicly, at least—decry psychic research, branding it shoddy and unfounded. Some hide behind the rationalization that there are sufficient puzzles to investigate within the areas of normal perception without wasting efforts groping with the paranormal. Others maintain that psychic research is dependent upon weak, statistical arguments, non-reproducible results, subjective interpretations, even outright fudging of the facts. Examples of all these criticisms are all too frequent. But whether the incidence of them is any higher within the ranks of psychical research than other branches of scientific inquiry is open to question. Many psychic researchers do delude themselves (consciously or unconsciously) by their preconceived belief in the phenomena they study. So do scientists in other fields. There are just as many subjective, weak statistical arguments put forth in the hundreds of “legitimate” science journals as are found in parapsychology reports. But the former are quietly dismissed without further fuss or funding. Because they do not impinge on personal, emotionally sustained belief systems, no one really cares.

But parapsychology is different. It stretches most people's beliefs into rigid opinion either pro or con. Anyone left standing in the middle ends up whispering to himself. Yet this is my attempt: to chronicle Stanford Research Institute's experiments with as little prejudgment as possible. Still, some preset inevitably exists.

In college, while waiting for a date to take an exam, I visited J. B. Rhine's famous parapsychology laboratories at Duke University and was talked into taking the famous ESP test with Zener cards, predicting them, as expected, exactly at chance. Score one for curiosity, zero for belief.

A few years later I experienced an altered state of consciousness—ludicrous as it seems—while playing in the All-Navy Tennis Championships. Inadvertently, I had gotten into a state of self-hypnosis, or whatever, blanked out, and beaten a player so much better than myself that

the event has become one of the experiential highs of my life. Spontaneously, without any knowledge of the esoteric practices that deluge us today, that match gave me a glimpse through the doors of perception, just a glimpse.

Then came the launch of Apollo 17, the last moon mission. Helping to cover the flight for *Time*, I was at Cape Canaveral, missing sleep, working hard, and finding myself stressed by the keen edge of mythology that cut into nearly everyone's sense of the event. The set, the event, the stress, and the flow of heady ideas from several compatriots once again led me into new experiences that I can only term altered states of consciousness. They included some apparent psychic happenings, minor in nature, highly subjective, and unproven in the strictest sense; nonetheless, highly intriguing.

The result of these few puzzling experiences is that I am willing to examine the claims made for psychic phenomena. The reality of psi does not wreck any of my beliefs. I do not feel threatened by the possibility that a person can “see” activities happening miles away. Startled, yes, but not threatened. Neither do I feel any compulsive urge to validate such paranormal phenomena. I am content, even awed, to live with the present level of strangeness in the universe. Certainly there is no need to invent more. But when rumors emanate from legitimate sources that human beings can break metal with the energy of their mind, wilt flowers at a glance, travel with their mind inside complicated, scientific instruments and alter their functioning, even fly “out of body” to the planets, I welcome the opportunity to investigate firsthand these extraordinary claims.

More times than I can recall conversations with friends and strangers about some of the events in this book elicited a surprisingly similar response: “Oh, that happens to me all the time.” From the cabbies who drove me, waitresses who served me, to the photographer who processed the photos, all across the country during the reporting and writing of this book people volunteered their innumerable personal encounters with the realms of psi. To the average American, paranormal phenomena apparently come as no surprise.

In fact, more than half of the adults in this country feel

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that they have experienced some kind of psychic happening at least once in their lifetime, according to a recent survey by two highly respected sociologists of the National Center for Opinion Research at the University of Chicago. This surprising statistic was compiled by Father Andrew Greeley and William McCready in an extensive interview with 1,467 persons in a representative sample of Americans over the age of eighteen. The two-year, \$150,000 study, commissioned by the Henry B. Luce Foundation, was intended simply to be a survey of basic religious attitudes. But the mystical, transcendent, and paranormal kept popping up to the surprise of the researchers. Fifty-eight percent of the respondents reported the feeling that they had experienced ESP of some kind; fifty-nine percent thought they had undergone *déjà vu*, the feeling of participating in an event that had happened before; nearly one-quarter felt that they had had a clairvoyant perception; and twenty-seven percent thought that they had communicated with the dead.

Significantly, those reporting these experiences are not just "young freaks" with a case of the California highs. Each paranormal category logged by Greeley and McCready clusters in different age groups: clairvoyance is most common among adolescents; both the young and the old mention contact with the dead as their most frequent psychic experience; and the more than thirty percent who acknowledge some type of mystical, religious experience fall in the middle-age bracket of forties and fifties. Even more surprising is the finding that eighteen percent of the sample—which extrapolates to about one in every five adult Americans—report that they have these experiences frequently. The Greeley/McCready data strongly suggest that well over one hundred million voters and taxpayers in this country soberly acknowledge the reality of psychical and mystical experiences as part of their everyday lives. Like you and me, they have undergone a few strange encounters that the mind selectively tucks away so that day-to-day living can proceed unembarrassed, unheralded. Yet such experiences are solid passages in their vision of reality.

The pursuit of this reality raises exasperating conflicts of ambiguity. I suggest that the most comforting precept to carry in companionship during this search belongs to that enlightened Victorian, Thomas Henry Huxley:

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Sit down before fact as a little child, be prepared to give up every preconceived notion, follow humbly wherever and to whatever abysses nature leads, or you shall learn nothing.

I am not the same man—none of us are.

—Apollo-9 Astronaut Rusty Schweickart

I was a rotten S.O.B. before I left. Now I'm just
an S.O.B.

—Apollo-14 Astronaut Alan Shepard

We reached out and touched the face of God,
and he in turn touched us.

—Apollo-15 Astronaut Jim Irwin

A SPACEMAN'S ODYSSEY

URI GELLER FIRST CAME TO MY ATTENTION ON A GLORIOUS summer-in-winter Southern California Sunday afternoon. Malibu surf rolled in, trailing sun sparklers to the horizon, while breeze, blue sky, and Brandenburg concerti melded in a tranquilizing high, promoting ripeness for belief in almost anything. The telephone interrupted. Edgar Mitchell asked if he could come by the house to discuss his post-lunar exploration of man's consciousness. More particularly, he wanted to talk guardedly about his recent investigations into the strange powers of a young psychic newly arrived from Israel.

I knew Mitchell from covering his Apollo 14 flight to the Fra Mauro region of the moon. He was one of the most atypical of all the astronaut corps, a combination hot test pilot and cool, MIT-educated egghead, as ready to explore the intricate origins of philosophy as to tramp the unknown regions of the moon. During a private conference a few days before his moon launch, Mitchell admitted some of his quietly held beliefs: "I am completely unable to separate science from art and from humanity or theology. Man is a total being, and I refuse to say science should be divorced from religion or from humanity. It's all one big kettle of fish and it should be approached as such"—uncommon thoughts from one of NASA's macho gang.

Unknown to NASA, Mitchell had prepared an off-the-cuff extrasensory perception (ESP) test to be conducted aboard the command module, Kitty Hawk. Using lists of random numbers, to which he later assigned the standard ESP Zener card symbols—a circle, a square, a cross, a star, and parallel wavy lines—Mitchell attempted to transmit the

order of these symbols telepathically to four earthbound receivers. At first, Mitchell declared that his results were statistically inconclusive. But later he claimed that one analysis of the scores yielded an "amazingly low" (three thousand to one) coincidence of hits, suggesting "psi-missing" was at work. (Such after-the-fact interpretations remain one of the biggest criticisms leveled at parapsychology.)

But beyond inconclusive telepathic tries, the forty-one-year-old astronaut underwent something far more important during his voyage aboard Apollo 14—a transcendent religious experience. In understated, near-confessional tones, Mitchell told me: "On the way back, after that wonderful experience on the moon, perhaps in a little euphoria, I did experience an altered state of consciousness. Just by looking at our planet on the way back, I saw or felt a field-consciousness state. This was a state in which the question of purpose and power in the universe ceased to be faith and became knowledge."

Like David Bowie's mystical spaceman, Major Tom, the rush of intuitive insight and extraterrestrial bliss shook Mitchell to his core. He returned to earth convinced that mankind was on the verge of an evolutionary takeoff into realms of expanded consciousness and heightened awareness, including psychic capabilities that have long been dismissed by the Western world as mere delusion and deception. The experience literally changed his life. Soon after leaving his post-flight quarantine in Houston, Edgar Mitchell decided to redirect his life's work from outer to inner space, toward the study of man's consciousness. Energetically stepping out on his own, he established the Institute for Noetic* Sciences and began collaring listeners and support wherever possible.

In late 1972, Mitchell spoke at a UCLA-sponsored banquet that I attended, and he described his work with an irascible faith healer from Tennessee who had taken the Tibetan name of Norbu Chen. Mitchell also briefly mentioned a psychic sensation named Uri Geller, but he pro-

* After the Greek word *nous*, meaning "mind"; Plato suggested that noetic knowledge was direct cognition of eternal truths, a comprehension that surpasses more accustomed, logical mechanisms of knowing.

vided no details. Later that same evening, the man responsible for bringing Geller to this country, Dr. Andrija Puharich, dropped enticing hints about Stanford Research Institute's *sub rosa* investigation of Geller. "But I am sworn to secrecy," Puharich told me, adding the element of intrigue to an already bubbling, psychic brew. The little that I could determine, however, suggested that a modern Merlin was being hailed at the prominent think tank.

When Mitchell arrived at my house that Sunday afternoon, he was a man with a plane to catch and a new world to explore. After perfunctorily remarking about the ocean view, he got down to business. "I realize that there is a life-force or an energy mechanism that is not explainable by current law," he stated earnestly, denouncing the strictly materialistic concepts of modern science. Nervously chain-smoking, the ex-astronaut sought to explain his recently crystallized view of reality, which included subjective as well as objective levels of consciousness. His hopes ran high that day, with ambitions for a profit-making company spending "a couple million bucks a year at least" on research into man's subjective consciousness. NASA's cash-barrel way of bankrolling projects obviously had infected the retired astronaut. His was a noble, if overly ambitious, endeavor, and I wished him well.

"But what about Geller?"

Stanford Research Institute (SRI), south of San Francisco, where the Israeli psychic was being studied, stiffly turned away all inquiries about Geller and the investigative work being done there. A few weeks prior to Mitchell's visit, I had flown up to talk with SRI on assignment for *Time* and had solidly been denied any information about their psychic research, receiving a dustoff reminiscent of many a classified government project I had probed in the past.

"They are being very careful," replied Mitchell, who had participated in some of the Geller experiments. "SRI is a staid institution, very cautious about their image." Then, offhandedly, he dropped in an almost ominous revelation: "When you were there, you were carefully screened."

I did not pick up on the statement at the time. But in retrospect, his words suggested darker aspects that still attend the SRI research. Leaning confidentially toward me,

Mitchell enthusiastically stated, "The sorts of things Uri performed at SRI that can stand up scientifically are magnetic fields being altered, television pictures being moved at will, and levitation; also, telepathic and clairvoyant phenomena. We tried to stick with one thing or the other, but things just kept happening. It's the nature of the phenomena, and this is what the scientific world has got to understand."

To hell with the scientific world. How about the rest of us? Here was a respected, obviously sober, intelligent human being, screened scrupulously by NASA, intently vouching for the authenticity of human behavior which, by any standard, could only be termed phenomenal.

The principal reason why Geller has attracted such widespread attention—and criticism—is that his powers allegedly affect material objects. His feats directly challenge the mechanistic beliefs of those of us raised in this Western technological society, immersed as we are in a value structure based on linear cause and effect. Mind reading, telepathy, even clairvoyance—astonishing as they may be—tend to be more acceptable to the logical Western mind. But anyone caught using just his brain waves to switch television pictures—or wipe them out—better watch it in this McLuhanesque society. He is monkeying with the cornerstone of our entire culture.

For a reporter, a story of such potential magnitude is like catching a perfect wave, surfing in "at the edge of history." I double-checked my tiny tape recorder to ensure that it was picking up these revelations and pushed it a few inches closer to Mitchell.

The ex-astronaut continued to entrance me with tales of Geller's abilities, vouching for the psychic's demonstrations of clairvoyance, levitation, magnetic field altering, destruction of metal rings and bars—even the supreme conjurer's feat of materializing and dematerializing solid objects.

In one demonstration, a standard TV test pattern was recorded on video tape, then frozen on a single frame and displayed. Mitchell recalled how Geller stepped up to the tape player, thrust out his left fist over the playback head and commanded: "Now!" The picture, one single frame on video tape, disappeared.

Weird, wonderful, and wild. But was it true? It all

sounded too pat, too convincing. Where was the skepticism?

Admitting that Geller was never even searched prior to these demonstrations, Mitchell countered with committed believer's rote: "If you come in strongly negative and skeptical, you slow down the work. You have to design the experiment so there cannot be fraud and then you have to encourage and believe, and go with the man all the way."

Yes, but how can fraud be eliminated from consideration? Give Geller, or any paranormal performer, merely the chance to work tricks, and regardless of the results, the experimental protocol goes down the drain. Just the possibility of suspicion, not the proof of fraud, is sufficient for scientific hard hats to disown any of the spectacular conclusions, I argued. "We never found fraud," insisted the former astronaut.

Because Mitchell's group had partially funded the six weeks of Geller research, he was anxious that SRI make the results public. He was concerned that the reputable think tank was sitting on its findings, afraid (with some reason) of getting pasted with a kook label. "Now that they've got this stuff, they don't know what to do with it. Man, they're puckerred."

I was stunned by his tales of Geller's incredible powers and could appreciate SRI's reluctance to make public such mind-bending claims. If the account had come from just another psychic researcher or some flaky psychologist without credentials, it could have been put into some acceptable perspective—acceptable, that is, to a skeptical curiosity unwilling to swallow a total realignment of modern science in one gulp. But here was the sixth man to walk on the moon telling me that the reality to which I had clung for thirty-four years was only a mirage floating above a real, but hitherto, unseen sea. Not only did I have Mitchell's word for it, but also his second-hand testimony from a group of scientific investigators at one of the world's best-known research laboratories. Mitchell assured me that "everyone from SRI President Charlie Anderson on down believe Geller is real." Culling every resource of rational skepticism I could, I protested, arguing that the evidence

was mushy at best. How did these experts know that they were not being fooled by their own prejudices?

"You can cop out on that, John, from now to kingdom come, and not confront the evidence," responded Mitchell, irritated that I still maintained reservations. "I can't prove to you using the skeptics' methods that I went to the moon. There's no way in hell I can prove it, using every record NASA's got. If people want to say Geller is a great big hoax, there's no way I can refute it. Me and fourteen other guys have been to the moon, yet if you force us to prove it, we only know subjectively that we went. A lot of other people, including the men at the console, think we went, but they can't prove it, either. That's precisely the problem we've got with psychic research." But, I countered, the astronauts brought back rocks that others could examine.

"Geller held a freshly plucked flower in his hand for a few seconds and it completely wilted."

I was hooked. There was no other choice but to take Mitchell at his word, confront the evidence of Geller and psychic research, and reserve judgment until all sides—skeptics, believers, and those uncommitted—had made their case. The possible conclusions were too important to do anything less.

To believe that the world is only as you think it is, is stupid," he said. "The world is a mysterious place. Especially in twilight."

—Don Juan to Carlos Castaneda,
from *Journey to Ixtlan*

TWO

THE MIND-BENDER

"I WAS BORN WITH THESE POWERS," ASSERTS URI GELLER. "I feel that I was actually given them from some source." Simple, declarative statements, but are they fact or fiction? Listening to Geller's earnest voice spin his tale, one is reminded of UCLA student Carlos Castaneda as he was confronted by the Yaqui sorcerer Don Juan. Is what the listener hears a wily fabrication or a glimpse of reality beyond normal ken? There is no clear answer. As with all legends, details become distorted, transposed, heightened, after their one thousand one nights of re-telling.

Uri Geller was born on December 20, 1946, in Tel Aviv, Israel, the only child of Itzhaak and Margarete Geller. "I don't want you to think I'm a Moses or a Jesus, but according to the Israeli account, Jesus was born on the twentieth of December," Geller once confided. "Maybe it's a coincidence. I believe that Jesus had powers, and so did Moses, and so did all those others in history."

At the beginning of World War II, his parents fled Hungary for Palestine. Geller's early life was spent on a spartan, war-ready kibbutz near Beersheba. His father, Itzhaak Geller, was later to become one of the Israeli Army's most celebrated, long-serving regimental sergeants. Uri claims that his Berlin-born mother is related to the Sigmund Freud family. While still a young child, his parents divorced and Uri moved with his mother to Tel Aviv. Geller seldom, if ever, mentions his father, though friends from his youth say that Uri was tremendously proud of his father's military accomplishments in the tank corps and sought hard to follow in his illustrious path.

"I always knew I had these powers," continues Geller,

repeating his well-rehearsed genesis. "The first time I found out I was in school, messing with my watch." His mother had given him a wristwatch for his seventh birthday. Bored with school lessons, Geller unfastened the present and placed it on his desk. "I could see the hands move ten minutes, fifteen minutes. Nobody touched the watch. That was the first time I found out I had some sort of power." While at home, Uri says, the watch would not perform its mysterious jump in time. "Always it happened in class. Then I knew that things had to happen when people were around, because I'm using their energy." The watch trick was shown to a few incredulous friends. Embarrassed by their ridicule, the boy gave up any further demonstrations, he says.

"My mother knew that I had some sort of power," continues Uri. "She used to come home from playing cards and I used to tell her exactly how much she won or lost. So she knew there was something in me, but she wouldn't refer to 'powers.' You know, the old-fashioned people, they don't even know about telepathy and all that." If Margarete Geller believed strict Old Testament precepts, it's no surprise that she was silent about her son's talents. Like Hindu, Buddhist, and Sufi masters, the ancient Hebrews deplored psychic feats, declaring them "an abomination unto the Lord."

The childhood tricks of wristwatch psychokinesis and cards clairvoyance are two accounts Geller never fails to tell his audiences. Their incredible postulates help to shape the listener's image of a psychic prodigy and to establish a receptivity for what follows.

A few years after the discovery of her son's self-proclaimed gifts, Geller's mother married again, this time to a man who ran a small hotel in Nicosia, Cyprus. Uri moved with the family to that mystical island homeland of Adonis, bitter lemons, and Levantine intrigues. Cyprus was also one of the ancient centers of worship of Aphrodite, as well as the legendary home of Pygmalion. All this mythical grandeur formed an appropriate backdrop for Geller's teen-age fantasies and his occult life to come.

At such an island crossroads it was natural that Uri add English and other tongues to his expanding language fluency. (Hungarian was his first language, Hebrew his

second.) But Geller recalls little progress in his more intuitive skills, and, in fact, claims that again he deliberately concealed his paranormal abilities for fear of the chiding scorn of schoolmates.

Shortly before his nineteenth birthday, mother and son returned to Tel Aviv. A black mane of leonine hair now topped his six-foot two-inch, deceptively powerful frame. To this day he continues to work out with body-building weights; yet his smooth muscles have a loose, dilettante's slackness to them. In keeping with his early stirred vanity, and aware of his father's heroic shadow, the darkly handsome teen-ager volunteered for Israel's elite paratroop corps. The record is murky, but it is known that he washed out of the officer's course; then he was asked to leave his paratroop unit. Nevertheless, Uri did see action during the 1967 Six-Day War.

"The war, I'll never forget," Geller shudders, recalling an incident in his camp near Tel Aviv just prior to going into battle. "I knew guys that were not going to come back. When I came back to my unit, there was a guy, his name was Abraham. He was the radio operator in the captain's tank. I could operate the radio, so he asked me, 'Do you want to change places?' I want to say 'yes,' then I say 'no, I don't want to.' I looked at this poor guy and knew something was going to happen. There, sitting in the command tank, they took a hit and all died. . . ."

Unfortunately, this prescience for disaster worked only on others. Sergeant Geller caught a machine-gun burst through both forearms during the fight for Jerusalem. Recovering from his battle wounds in a rehabilitation center, Geller (according to his version) met and began dating a honey-blond, sixteen-year-old named Hannah Strang, who worked as a clerk for Motorola. But the young soldier's Hemingwayesque narrative is challenged by Hanna herself. She was quoted in the Israeli weekly, *Ha' Olam Hazei*, saying Geller first made contact with her through her younger brother, Shipi, whom Geller had met while serving as a summer camp counselor during his army rehabilitation period. Whichever version is correct, the three—Uri, Hannah, and Shipi—became almost inseparable. The close kinship prompted Geller to reveal his strange powers of telepathy and flip-flop clock-watching. Shipi,

some seven years younger than his soldier friend, was entranced.

After the war, Geller's teen-age friends returned to school and he went back to army duties until his discharge in late 1968. Because of his language fluency—he now claims six languages—ex-paratrooper Geller found a job with a textile company. After about a year of shuffling English, Hungarian, and Greek purchase orders, Geller was asked to perform his trick routine before Shipi Strang's classmates; the act consisted mainly of blindfolded sensing of drawings and numbers chalked on a blackboard. The act was a smashing success. Word quickly spread throughout the Tel Aviv community that Uri Geller's stunts added spice to any gathering, and his performance fast became a neighborhood favorite. Before long he had upped his fee to one hundred Israeli pounds, equivalent then to about thirty-eight dollars. "That was unbelievable for me. It was great. At the textile factory, I earned five hundred pounds a month working eight hours a day."

Lured by cash and fame, Geller soon quit his mundane factory job and moved into the professional circuit of one-man shows. His naturally beguiling stage manner, polished by a former moonlighting stint as an underwear model, began to pay off. If you can have stage presence in nothing but BVDs, presumably your onstage aplomb is unshakable. Tossing purchase orders to the wind, the handsome Geller bounded straight for the kleig lights. He signed with a manager, acquired a publicity girl, and trumpeted his story of paranormal powers throughout Israel. For a while the walls came tumbling down. His big break came when he appeared on the Shmuel Shai show at the Sheraton Hotel in Tel Aviv. Shai, the Israeli equivalent of Johnny Carson, later promoted Geller's career on his television and radio shows. Shai was the first to congratulate Geller for his slick talk-show performances and advised the youth to pursue a career in show business. "But I never thought that he'd start thinking himself superhuman as if he'd come from the moon," says Shai.

The psychic ex-paratrooper fast became a media event and was booked throughout Israel, sometimes playing two to three shows a day. Geller claims to have performed his one-man occult act better than two thousand times during

this early three-year blitz. He was strictly show-biz then, eager for the cool money, hot lights, and warm glances from pretty admirers. Uri would take the stage with all the bounce of the hometown kid he was, exuding an enthusiastic, naïve charm, prefacing his act with apologies to the audience in case his powers were not with him at the moment. Calling for volunteers to step up to the stage, Geller generally selected a disproportionate number of women; the better looking they were, the more enthusiastic he was. He would have them choose a number, a color, or the name of a capital city, then write it on a blackboard while he shielded his eyes and attempted to "see" the choice on an imaginary "television screen" in his mind. He also would work with people's watches, passing his fists over them and making the hands advance, just as he used to do with his own watch in school. Standing at the front of the stage, Geller would point to members of the audience, calling out items they had in their purses or jackets. The climax of every show would be his attempt to bend or break metal objects without touching them. Rings, spoons, keys, and personal items of all sorts would come under his piercing gaze and steady hands, then appear to bend slowly or split in two. He was a sensation.

Had Uri Geller merely persisted in a show-business career—however stellar—his story would carry no more interest than the usual hometown-boy-makes-good saga. But his growing fame as a psychic performer attracted the attention of Dr. Andrija Puharich, an American medical doctor of Croatian descent. It was the interest and dedication of this intense psychic sachem that catalyzed scientific involvement with Geller. More importantly, the ensuing legitimization of Geller by the parapsychological research community thrust the publicity-hungry young man front and center in a renewed debate over the reality of psychic phenomena in general. After some preliminary studies, Puharich persuaded the Israeli to come to the United States to be studied seriously. The move lifted Geller out of the smoke-filled nightclub circuit and into the big time of posh Town Hall bookings, Central Park West penthouses, and prestigious West Coast laboratories. His fame in Israel was but a prelude to the attention that was to be focused on

him here, both as a performer and as an object for serious scientific scrutiny. Geller had arrived.

"No more room, folks. Honest, absolutely no seats left. Even the aisles are jammed." The NASA man begins his runaway spiel twenty-five minutes before showtime, but the crowd continues to surge toward the auditorium entrance.

"You'll have to watch Geller on closed-circuit TV," he pleads with anxious latecomers. "We've got it set up in Opscon, Building Fourteen, and Room 231 of Building Seven. You'll be able to see him there. Please, nobody else in here."

The frustrated barker might just as well hope to wrestle to earth a moonbound Saturn rocket as hold back the swarm of systems engineers, particle physicists, geochemists, trajectory analysts, and hard-nosed planned and programmed managers pushing forward to secure their vantage points for the four o'clock engineering symposium.

It is a fine spring day and Uri Geller is the attraction. His presence seems to fill the air with a feeling of vernal revelry. Well over an hour before the psychic's scheduled appearance, the three-hundred-seat main auditorium at Goddard Space Flight Center (fifteen miles northeast of Washington, D.C.) begins filling with hyperexpectant spectators. Many clutch a broken watch or spare garage key, each with the hope of taking home a Geller-worked trophy. The shovers include brassy-haired typists and clerks, gum-chewing secretaries in tight skirts, eager for an afternoon's romp—however vicarious—with the magnetically charged Geller, anxious for a touch of his hand and voice before busing home to efficiency apartments and *Cosmo*-inspired dreams. A trinity of Maharaj Ji, Evel Knievel, and Bob Dylan descending could not produce more squealish anticipation.

"The fire marshal is going to raise hell if he sees these aisles," warns an aide, noting the across-the-aisle wedges of squatters. "So what?" is the answer. "We can't move 'em out now. No way."

Finding Geller performing at a NASA installation is a bit of a shock. The appearance demonstrates the extent of his popular image, which took less than two years in the

United States to achieve. Details of how his invitation originated remain cloudy. Apparently a Goddard worker, and member of Isis, a Maryland group that is sort of an occult free clinic outside Washington, proposed the psychic's appearance at one of Goddard's regular engineering symposiums. Usually these colloquia cover such predictable topics as the future of the space program, computer security, or the comet Kohoutek. But a fifteen-minute demonstration to the colloquium committee, plus his impressive George Washington University performance, convinced the committee to issue Geller the unusual invitation.

"I found him very interesting and in some ways very convincing," explains Mrs. Marjorie Townsend, chairperson of the colloquium committee. A bright, cheerful woman, Mrs. Townsend is the respected project manager of NASA's Small Astronomy Satellite program, a series of highly successful orbiting observatories. She is the highest-ranked woman in the space agency.

"Yes, we're very concerned about Geller's exploitation of NASA's name," she continues. "But we finally decided as a committee that our purpose here is to provide colloquia of interest to our employees. We want to provide our people with a mind-broadening experience." Geller certainly qualifies. Despite her announced skepticism, Mrs. Townsend wears a spare, miracle-proof watch on her wrist. "I banged it and wound it and did everything I could to get it started," laughs Mrs. Townsend, convinced that it will make good test material for the psychic.

The show is late in starting. Geller nixes earlier plans and insists on running a thirty-minute film of his experiments at Stanford Research Institute before taking the stage. "I'm sorry, Marge, he was adamant," apologizes an anxious assistant. As the film drones on, Marge Townsend fidgets more and more. She is not accustomed to being crossed. After ten minutes of growing anger, she gallops onto the stage while the film still is rolling—the image of Geller superimposed on her forehead—and waves her arms and shouts to the projectionist, "Cut the film." Returning to her seat, this mother of four confides, "That is the way to deal with a temperamental kid!"

Enter a nervous Geller, dressed in dark blue slacks and

blue shirt. "I've never been under such pressure in my life," he protests, upset by the film's interruption. Immediately he solicits the audience's sympathies, saying that he is being rushed, that such pressures may affect his ability to perform. Launching into his standard stage routine, he carefully selects volunteers from the audience, all female, all good looking. One at a time, each is to think of "a simple color," then write her choice on a portable blackboard at one side of the stage. Geller, at stage left, opposite the blackboard, hides behind a small piece of plywood while he attempts to guess the color written on the board. He rocks back and forth, droning, "One . . . two . . . three . . . now," urging the audience to concentrate on the color along with the woman at the blackboard. Eventually, after several minutes of tortured effort, Geller says that he thinks the color is yellow. Wild applause greets the correct answer. But it was to be his only clear success of the day. Even moral support from his long-time companion, Shipi Strang, seated front row center, could not help.

Time after time, the colors, drawings, and capital cities just would not come to him. Was this the same Geller whom Edgar Mitchell had praised so highly? One handsome lady chalked "Den Pasar" on the board. Not many try to stump Geller with the capital of Bali, but what else could one expect from the wife of the editor of *National Geographic*? Puzzled, Geller seeks help from the audience, asking after a long silence if what she had written was indeed a capital city. Even the loud hints of "yes" do not help him.

At one point, Geller requests a photographer to move from back of the stage wings, complaining that she is in direct line with his vision. "You might be suspected as a spy for me."

In response to his request for watches to fix, the stage is mobbed. Fifty or more eager volunteers rush forward, Marge Townsend among them, dumping their watches in a kind of tribal tribute at Geller's feet. He picks up one man's wide-banded wristwatch, holds it to his ear, passes his clenched fist over it, holds it to his ear again, then puts it back on the stage floor. No luck. The same for a child's watch. Quickly tiring of his lack of success, Geller approaches a long table on the auditorium floor, covered with

pre-measured metal bars and rings, all awaiting his mind-bending powers. He dabbles with a few with a sort of window-shopping lackadaisicalness, then abruptly says that he prefers to work with more personal items. Again he is mobbed in a sea of waving door and car keys. He accepts one, and the closed-circuit TV cameras move in tight for a close-up of his hands rubbing a key. All the while Geller keeps his eyes on the large TV monitor. Five minutes later the key is still unbent; yet the audience remains completely with him, so ingenuous, so sincere is his apparent effort. "I just don't seem to have it today," he laments, "but I've never had to work under such bad conditions."

Andrija Puharich joins his protégé onstage for a question-and-answer session. The gathering of engineers and scientists hangs on Geller's every word as he describes his intricate involvement with extraterrestrial forces: "We were like students being taught by something much higher than us. I still don't dare to say they are 'beings,' since I have never seen them. I don't know if they are people, or beings, or just plain energies. But these things happened to us, and I am not going to back away from the truth. . . . I believe that there are intelligences outside our planet. I think that every scientist will agree and say that our planet is not the only one that is civilized." There was not a person there that disagreed. They were hooked; after all, this was NASA, an agency whose purpose is finding life elsewhere.

Surrounded after his performance by eager questioners, Geller again tries his luck with proffered keys. Suddenly, one is shown slightly curved and the word quickly spreads: "He bent it, he bent it!" The group shoves forward to see. A middle-aged man wanders distractedly away, holding a slightly bent door key in front of his nose in disbelief. The group closes in on Geller again, surrounding the psychic in mass confusion, some of the women reaching out to touch him adoringly. "It's like being a pop star in a band," Geller once told me. "Everywhere I go they want to fondle you, they want to kiss you. They're sick people."

Urged outside by scientists who want to drive him down to a magnetic test facility, Geller stops to work on another key thrust at him by a true believer. "Come with me," Geller orders, popping around a corner with the man into

a vacant office. The mob of well-wishers follows, stopping at the door. Moments later, the man emerges smiling, holding aloft his bent key like a Greek diver with a recovered Epiphany cross. "Oh, look," cries someone, "he bent it!" All attention focuses on a forty-five-degree angle to the key, which the owner swears was not there before. Stumbling toward waiting cars in a crush of near hysteria, the scientists whisk Geller away for more serious demonstrations in Goddard's unique magnetic test facility.

The fuzzy black-and-white image on the television monitor washes out in the glare of a setting sun. Hoping to darken the picture, a physicist in the crowd hops onto a chair and tapes sheets of paper across the windows. That helps a little. The TV figure is rigid, hunched over, fists clenched, caged a quarter of a mile away inside the forty-two-foot-diameter coils of Goddard's magnetic test facility. Uri Geller is trying to create a magnetic field with the force of his mind while a score of NASA scientists urge him on. The psychic is inside the same facility that surveys spacecraft for telltale magnetic signatures. Parts of the lunar rover, for example, a jeep-like vehicle astronauts drove on the moon, were checked out by this uniquely sensitive apparatus.

When he first entered the imposing cage, Geller betrayed some apparent apprehensions. "I don't understand this," he protested.

"Uri, just concentrate on the magnetic field," coached his mentor, Puharich. "It's the same thing as when you worked on the magnetometer at SRI."

"Yes, but the problem is that I don't know what to do," confessed the psychic.

"Hey, you got any iron filings?" yelled the scientist in charge. "He may be able to make them move because he doesn't seem to know what a magnetic field is."

Throughout this entirely confused scene, Geller's *paparazzi* pal, Shipi Strang, is shooting nonstop pictures of the event. The man at the controls cautions everyone to be still as he gently moves dials to lower the magnetic field inside the coils to less than one-ten-thousandth that of the earth, the equivalent of being in outer space. Geller tries, but the ten pens inking out the results show no change.

THE SEARCH FOR SUPERMAN

"He feels he must have a field to fight against," calls out the controller over the squawk box. "I'm going to put fifty thousand gammas in the vertical, equivalent to the earth's average field."

An assistant offers Geller a hand-bearing compass, one like sailors use to take bearings, in an attempt to try to make its pointer move. "He's asking everyone to help him," come the instructions over the squawk box. The crowded viewing room quiets. Geller is now sitting cross-legged in the center of the laocoon nest of electronic arches, assuming the pose of a yogi in deep trance, the boxed compass in front of him poised like some mystical icon.

A quiver shakes the X_2 pen. Anxious eyes scan it for significance. It continues wiggling for a moment, then settles back after registering several half gamma swings. "It seems that Uri is producing a magnetic field," announces the scientist in charge. Pushing a button to talk with the controller, the disbelieving scientist asks, "Chuck, what's going on here? I'm seeing all sorts of field changes."

The squawked reply: "As far as we can tell, there are some small changes, but no major changes."

Was it Geller, or just some stray magnetic noise, possibly a slight jar of the compass standing in front of him? The informal test proves nothing—except the inordinate interest generated by Geller's personal charisma.

This is no game, though. Accidentally bumping into the man next to me as we both vie for a look at the squiggling readout pens, I apologize. He is rapidly scribbling notes on his clipboard, totally absorbed in the experiment. Youngish, with glasses, I mistake him for a NASA scientist and ask his opinion of the results. "I don't know. I'm trying to find out myself what's going on."

Slightly flustered, he introduces himself as "Commander L—," mumbling something about working for the chief of naval operations, "... uhhh ... in supply." Quickly the commander scurries out of range of any further questioning. Later checking reveals his true mission. Commander L— is assigned to navy intelligence. His mission: Geller.

The chief difficulty Alice found at first was in managing her flamingo; she succeeded in getting its body tucked away, comfortably enough, under her arm, with its legs hanging down, but generally, just as she had got its neck nicely straightened out, and was going to give the hedgehog a blow with its head, it would twist itself round and look up into her face, with such a puzzled expression that she could not help bursting out laughing; and, when she had got its head down, and was going to begin again, it was very provoking to find that the hedgehog had unrolled itself, and was in the act of crawling away: besides all this, there was generally a ridge or a furrow in the way wherever she wanted to send the hedgehog to, and, as the doubled-up soldiers were always getting up and walking off to other parts of the ground, Alice soon came to the conclusion that it was a very difficult game indeed.

—Lewis Carroll,

from *Alice's Adventures in Wonderland*

THREE

FROM RA HO TEP TO HOOVA

THE RIDE UP TO ANDRIJA PUHARICH'S HOME IN OSSINING, New York, took about forty-five minutes from downtown Manhattan, where he had picked me up. I was on the way for a meeting with Uri Geller, who was waiting there fresh from several weeks of scientific testing at Stanford Research Institute in Menlo Park, California. It was to be the psychic's first major press interview since arriving in the United States. Mutual friends had introduced Dr. Puharich to me in California a few months earlier, but his eager greeting and all-too-cordial laugh betrayed hints of uneasiness, a tension that I attributed to an anxiousness to have his protégé score impressively during my visit. Puharich's uninterrupted storytelling gave me time to examine this strange scientist, a man who has spent most of his life working on the fringes. His most striking characteristic is a languid, almost dreamlike demeanor that echoes in his flat, emotionless voice. He is most pleasant, jokes often, yet sarcastically chides anyone who does not side with his views.

Generally clothed in a turtleneck shirt and black suit or sport coat, Puharich's medium build is notable only by its bushy topping of wiry black hair, with mossy gray tufts sprouting down around the temples, which one viewer once described as a "natural fright wig." The doctor's own bent for the theatrical once carried as far as playing a "mad scientist" parapsychologist on a "Perry Mason" television show. Bushy black eyebrows with fishhook snags at the ends, and a full, middle-European mustache with mini-handlebars enhance the image.

With lulling, hypnotic monotone, Puharich began to re-

From Ra Ho Tep to Hoova

count his life with Geller. "Strange things happen when Uri is around, unaccountable things," murmured the doctor, speaking as if to make the listener crane to catch every word. Fresh eggs appear out of nowhere, then disappear from the front seat of his car, declared Puharich, chuckling as if to admit the absurdity of such a cosmic prank. The doctor's black Labrador retriever, Wellington, once was "teleported" outside the house, he asserted completely straight-faced, adding suggestively that Geller was not even trying to accomplish such a feat. "Uri would make things appear and disappear in the SRI lab, but they wouldn't document it." Broken rings, reappearing rings, tieclasp teleportations—fantastic accomplishments which somehow missed being recorded in the laboratory. "The SRI cameras run out of film just when it happens," grouched Puharich, suggesting a mischievous, unseen force was at work.

Puharich told of one afternoon in California when he, Geller, and two others had taken a casual drive from Palo Alto to Santa Cruz. Uri suddenly said to Hal Puthoff (one of the two principal SRI researchers investigating Geller), "Hal, would you give the ring in your pocket to Adrienne [Puthoff's wife-to-be]?"

The ring was made of machine-finished brass and was stamped with a special SRI serial number and had been weighed for identification. Geller had been unsuccessful in his attempt to break it under laboratory scrutiny and Puthoff had brought it along "just in case." Adrienne took the ring in her hand and the familiar Geller incantation began.

"Tell me when you feel something warm," he told her, placing his hand over hers. After a few seconds, she replied, "Yeah, I feel a little tingle."

"Open your hand," commanded Geller. The ring had disappeared—just like the fresh eggs and Wellington.

"Everybody freaked out," said Puharich, smiling, recollecting the event.

The group returned to Palo Alto around eight that evening. Puthoff parked his car and the party marched single file up the outside stairs to his apartment. Suddenly, out of the drizzling evening rain, something landed on the hard flooring at Puthoff's feet, sounding a loud "ping." It was a

metal ring. Startled, Puthoff bent to pick it up, checked the code number stamped on it, and declared in amazement, "That's the one that disappeared on Route 17."

Miracle? Or magic?

The most intriguing aspect of Puharich's story is the order of people trundling up the stairs. First Puthoff, then Adrienne and Puharich, followed by Geller, who was some twelve to fifteen feet behind everyone else. Should that raise suspicions? Certainly. But Puharich does not consider—publicly, at least—that disappearing rings falling from the air first could be skillfully palmed, then later backhanded over the shoulder, undetected. For Puharich, Uri's ring act was simply another visible, outward sign of the psychic's inward spiritual power. "But they [SRI] will never report the ring incident, because it's human observation." To this day, SRI's Hal Puthoff recounts the anecdote in wonder, willing to give Uri the benefit of the doubt.

This openmindedness when studying persons with alleged paranormal powers is necessary, but if not controlled, it can become a serious professional hazard. Aware of this, I tried to strike an uncommitted mental balance throughout all these wild tales. For the interim I would accept without question both the simple reality of the freeway with Puharich at the wheel and his uncommon sorcerer's tales. Judgments would come later.

Psychic researchers generally fall into two professional categories: those who investigate "ordinary" people or animals, looking for broad, statistical evidence to support the thesis that psi powers do exist; those who stalk the big game, the name psychics, who claim abilities far beyond the mundane calling of cards or dice. This latter category of researchers unquestioningly accepts the reality of psi. Their work strives to demonstrate the extensiveness and complexity of such sensory powers or perceptiveness. J. B. Rhine, the grand old man of American psychic research, with forty years of laborious piling on of Zener card statistics, is the prime example of the first kind of researcher. Those in the latter category are the real headhunters in the psychic jungle—and Puharich, throughout his career, has attempted to lead the pack.

His list of subjects reads like a *Who's Who* of the psychic

world. Medium Eileen Garrett (who established the Parapsychology Foundation) was the first noted subject that Puharich investigated. Then the energetic doctor brought Dutchman Peter Hurkos over to this country for study. (Hurkos later gained fame for his psychic participation in the Boston Strangler investigation.) Dutch sculptor Harry Stone, in addition to demonstrating for Puharich powers of telepathy and clairvoyance, would go into trances, recalling ancient Egyptian utterances claimed to be the reincarnate words of an Egyptian nobleman, Ra Ho Tep.

Early in his career at a wooded Penobscot Bay laboratory in Maine, Puharich experimented extensively with samples of "magic mushroom" (*amanita muscaria*), giving doses of the hallucinogen to both Hurkos and Stone, claiming that the drug heightened paranormal perceptions. Twice he visited Brazil to investigate the psychic healer, Arigo, whose untrained medical diagnoses and crude but effective surgery intrigued even a secret branch of the United States government. While in Brazil, Puharich claims to have photographed flying saucers, triggering his interest in the whole UFO phenomena.

Some of Puharich's most novel work involved electronic aids to enhance psychic sensitivity. He would place subjects like Garrett and Hurkos inside a large metal enclosure called a Faraday cage. This copper cage blocks all normal electromagnetic radiation and electrostatic charges from the telepathist inside. For example, a radio placed inside the cage will continue to play as long as the door of the cage is open. Once the door is closed, however, normal radio waves cannot penetrate the enclosure, and the radio goes dead—unless an aerial reaches from the radio to the outside. Similarly, an electric charge placed onto the copper screen harms nothing inside the cage. The United States government, anxious to prevent bugging of secret conversations—perhaps the paranormal as well as the normal variety—has studied extensively these effects of Faraday cage shielding on communications. The result is that important conference and code rooms in most, if not all, of our embassies and military installations throughout the world are placed inside specially constructed metal-screened Faraday cage enclosures to prevent eavesdropping.

When Puharich placed psychic subjects inside the Fara-

day cage, he reports that they doubled their success in matching sets of pictures telepathically. Then, with twenty thousand volts of direct electrical charge wired onto the cage, "... the scores jumped to an average of 43/50 hits," writes Puharich in his book, *The Sacred Mushroom*. Incredible? Maybe not.

Others have reported similar Faraday cage enhancement of ESP. The important item to note is that Puharich is no newcomer to parapsychological research. Indeed, he has long been regarded as the maverick of the field, hustling off hot prospects to study by himself, and later declaring momentous results. And now, his biggest catch: Geller.

Soon after his discovery of Geller, Puharich confessed to a close friend: "Everything Uri represents is all I've ever looked for."

The precise nature of Puharich's quest remains obscure and is probably as multifaceted as the career he has pursued since graduating from Northwestern University Medical School in 1947. He was born Henry Karl Puharich in Chicago, February 19, 1918, of Yugoslavian parents. The self-appointed use of Andrija (Croatian for "Henry") lends an air of Transylvanian mystery to this man of the occult.

Research into the paranormal came early. After four years of graduate work in physiology during World War II, Puharich attended medical school, then served his internship at the Permanente Foundation Hospital in Oakland, California. The young doctor moved into the more arcane areas of physiology, using a General Foods Corporation research fellowship to help establish his "Round Table Foundation" in Maine, where he formally began a career in parapsychology. There Puharich studied problems of deafness and parasensory awareness before the army drafted him to serve at the Chemical and Biological Warfare Center in Maryland, where there was interest in his work with hallucinogenic mushrooms and parasensory research. In November, 1952, he presented a paper entitled "An Evaluation of the Possible Usefulness of Extrasensory Perception in Psychological Warfare" to a Pentagon gathering. The next year he lectured the air force on research into increasing or decreasing telepathy: and the following year he presented a seminar paper on "Bio-

chemical Foundations for Extrasensory Perception" to members of the medical research lab at the Army Chemical Center. These instances of military and governmental interest in parapsychology, nervously hidden from public view, ominously have predated more popular interest in the subject.

During these years Puharich also studied the mechanisms of hearing, eventually helping found Intelectron Corporation in New York, with the purpose of developing commercial electronic aids for the deaf. His expertise in micro-electronics was put to use in inventing a device that converts sound into radio signals which, in turn, stimulate facial nerves. The aim was to enable a deaf person to learn to identify facial nerve signals with certain sounds, thereby enabling him to "hear." Though some experts question the practicality of this specific invention, there is no question that Puharich is an experienced experimenter with micro-electronic devices. In any event, his numerous medical patents apparently have been successful enough to allow him to devote most of his time to his first love, parapsychology. (Support for Puharich's work also has come from his three books, lecturing, and private grants.)

In his unending stalk of the paranormal, Puharich flew to Tel Aviv on August 17, 1971, loaded with cameras, tape recorders, stopwatch, and notebooks—determined to authenticate his latest psychic find, Uri Geller. First on the agenda: thought transference. Puharich began by scribbling down drawings, Greek letters, Hebrew phrases, geometrical figures, and mathematical equations. Geller duplicated them, almost to scale, according to the excited researcher. "I was satisfied rather quickly—within a couple of days—that he really had extraordinary telepathic abilities, but on the other hand, not greater than other subjects that I have tested," reports Puharich. "It was still within an understandable limit that didn't freak me out particularly."

Moving up the scale of parasensory difficulty, Puharich took off his watch and held it so Geller could not get at the stem or mechanism. Geller placed his left hand over the watch, still held by Puharich, and asked the experimenter to say when he felt something. Twenty seconds passed. "I felt a little sensation of heat," Puharich recalls.

Geller cracked his knuckles with a customary gesture of nervousness, then said, "Okay, look at it."

"The clock hands had been moved forward one hour and twenty minutes," swears Puharich. "But what really surprised me was that my watch—a laboratory stopwatch—not only had the minutes and the hour hand moved ahead an hour and twenty minutes, but the little dials that record the stopwatch movement also had moved ahead an hour and twenty minutes. So I began to take this young man seriously."

During this first week-long investigation in Israel, Puharich claims that he documented rises of six to eight degrees Fahrenheit on a thermometer that served as a focus for Uri's psychic energies. Puharich also recorded several of the usual Geller stunts, starting nonworking clocks and watches, as well as a success at breaking a gold ring held in someone else's fist.

The doctor was ecstatic. For years he had searched for a psychic messiah to anoint his life's work. "Uri is just the answer to my prayers," Puharich confessed to a friend. "He's the something I've looked for for thirty years."

"We were looking for one person like Uri about whom we could conclusively say that the powers exist or don't, somebody who could stand the gap in the lab," Puharich told me. "You read the literature and it's all statistics and showy-showy; there's no real, conclusive evidence." Uri Geller was propelled front and center in the psychic research debate. It was up to him to prove or disprove the validity of phenomena that for centuries had borne the fire of skepticism.

The long, private driveway ending in a curve in front of Andrija Puharich's estate-sized home was hidden from the road by a stand of tall, winter-barren elms whose stark lineations cast hard-edged shadows across the well-kept lawn. A sizable pond to one side of the property, backed by a small park of more tall trees, contributed to the still air of cloistered luxury.

Inside the multistory house, Uri Geller and I greeted each other with the same anxious hesitancy. His dress was Mediterranean casual, subdued but sexy. A plain blue open-neck sport shirt tended to disguise his husky shoulders; but

partially rolled-up sleeves revealed strong, hairy forearms. Geller's firm handshake confirmed the deceptive power in these arms. Large, burnt-brown eyes overhung with heavy black brows glistened with boyish enthusiasm. Yet the expressions that crossed this handsome face somehow seemed older, more aware than they should have been.

In addition to Puharich and his worldly assistant, Melanie Toyofuku, who had accompanied the doctor and me on the ride up from New York, the gathering includes Hannah and Shipi Strang, the sister-and-brother team who for several years had been nearly inseparable from Geller. Hannah projects a rough, earthy, Sabra beauty. Well-worn dungarees and clinging white T-shirt do little to dispel the effect. Brother Shipi—in Israel his nickname was "Simmy," after his real name, Shimshon—is thin and dour. Unobtrusive to the point of slinking, he continually masks his feelings with a scowl, uncommon in one so young. He always seems to be calculating, says very little, but devours everything going on around him. (Nothing had changed a year later when I encountered Shipi again in the Geller entourage, except that he had exchanged his nondescript clothes for an upbeat version of Beverly Hills chic—tailored faded blue dungarees with sequined patterns and matching jacket.)

Geller and I soon warmed up to each other: he, because I expressed the desire to examine the whole matter of parapsychology with as much objectivity as I could muster; I, because of Geller's overwhelming ingenuousness. In a husky, accented voice, Geller begins his story. His apparent candor is disarming. Fidgeting continuously on the couch, always moving, jumping up, darting nervously like a barracuda on the hunt, Geller breathlessly delves into his past, reciting biography and beliefs in a staccato of incomplete sentences, double-negative phrases, and unerring hype.

The psychic is the first to broach the sensitive topic of fraud, preempting the subject early in our conversation. "You read it in the papers, thousands of stories that they [psychics] did that, that they found that, and they saw that. But did they really?" questions Geller. "Psychic powers exist; I know it. But from those billions of stories, it's so hard to find the true one." Amen.

Turning toward me on the couch, staring intently into my face, Geller suddenly declares, "I'm not talking about you, sitting here and seeing me, because you'll see things in front of your eyes. But for you, tomorrow, to tell what you see . . . it is so difficult because there are so many charlatans and fakes that claim to do that and have that power. The whole idea of ESP was drawn back because of failures in the past. Actually, it's so hard to prove it, you know." Throughout this lengthy recitation, Geller's omnipresent mentor, Puharich, sits quietly in the background, nodding approval, prompting his pupil with gentle cues whenever the speech winds down.

Slowly, guardedly, an incredible story dribbles out, deliberately heightened by urging strictest secrecy on the listener. The Geller/Puharich facts are mushy at best, yet both relate the following events with apparent unself-conscious candor.

Andrija Puharich and Uri Geller claim that they are in contact with extraterrestrial beings who communicate through a variety of channels—sometimes through the trance voice of Geller, sometimes by cassette tape recordings that mysteriously start and stop. After being played just once, these tapes—true to their "Mission Impossible" origins—"dematerialize," vanish. Puharich says that the voices on these tapes speak in English but sound artificial—as if they were synthesized on a computer. "I have a big problem," confides the doctor. "I want to know if there is some intelligence out there that operates on Uri and through Uri and makes him do things or makes him not do things. I have no way of reaching this intelligence. I talk to Uri and he gives me what impressions he has. Finally I get pissed off and I scream, and no voice speaks to me from the sky, so I take the tape recorder and I turn it on. I put my questions on the tape recorder and leave the room. Then I come back and I play it back—Uri is a witness to this—and there is a message on there."

Breaking into a laconic laugh, as if it were the height of ridiculousness to question the source, Puharich adds, "It didn't come from some broadcast station. The curse is . . ."

"This you gotta believe," interjects Geller. "Andrija's serious now."

" . . . after I hear the message, the tape vanishes like *that* [snapping his fingers with a click]. Melanie [Puharich's assistant] has heard the tapes; all my staff has heard the tapes. You don't see it disappear. It's there one second and the next second it's gone." Even Puharich's Los Angeles lawyer and friend, Sidney Krystal, has sworn to friends that he, too, has witnessed these peculiar tape disappearances. According to Puharich, extraterrestrial transcriptions stay with him only long enough to hear them once; then zap, they're gone. "Sometimes I can't hear them right away because I have to do other things. And sometimes—this is God's truth, as God is my witness—this tape will actually vanish!"

"You talk about hard data," continues Puharich, chuckling again. "Nothing is guesswork, nothing is a nice, lovely, mystical feeling." But Puharich's "hard data" is extremely soft—if not outright unbelievable—in the eyes of anyone on the outside who may question the veracity of this amazing tale.

"What sort of questions do you ask?"

"Lots of questions, like, 'Were you there when Moses was trying to get across [he laughs] the Sea of Reeds?'—that sort of thing." Geller joins in, lending his word in support of the extraterrestrials.

"It doesn't happen to me alone. You see, I can prove it by people seeing it, people sensing it. Because if I would see it alone, I would think I'm crazy, hallucinating things, or maybe Andrija is, or maybe we both are. But these things happen while very important people are around. Damn it, they got to accept it, because when a tape disappears everybody sees it just vanishing; it's not there anymore; nobody went near that place [the tape recorder]."

"You say it vanishes after you put the question on it and then it reappears with the answers?"

"I tape the question on and then I just let it run or sit there," explains Puharich, deadily in earnest. "The switches get pulled all by themselves and the tape will run. Or if I want to see if anything is being recorded, I watch the VU [voltage] meter and that way I know something is being recorded. Then I play the tape back and there's a whole set of information in good English, in a synthetic voice—it's not real—and I hear them. That's all. Or usually I

want Uri to hear it first. As soon as he finishes hearing, poof, it's gone; it's another tape gone. There's a big tape locker up there in the sky filled with tapes."

Puharich and Uri break up laughing over this last witicism. Uri jumps up from the couch, waves his arms directly in my face, and insists: "John, you gotta believe us. It's [the tape cassette] there for a second, and then it's not there—in front of your eyes, you don't take your eyes off, it's not there, it's poof. You see this in trick films, but when you see it in reality . . . look, we've been trained now for one year. Now in the beginning, the first months, we were crazy, we both thought . . . I don't know what we thought. Just imagine, I don't know Andrija well, he doesn't know me, and things are happening. There were stages where I thought I was going nuts, you know, really crazy nuts, when I saw these things happen. Thousands of things happened that taught us; thousands, is that right, Andrija? I'm not talking instructions, but *things* that happened—thousands, every day, three or four . . ."

Dr. Puharich interrupts Geller's monologue: "For example, how a radar can be jammed, how computers can be reprogrammed, how motors can be shut off in cars, how gears can be shifted when nobody's hand touches it—every mechanism known to man. The Voice I speak about that comes here . . . sometimes I'll pick up the phone and there's the Voice on the phone."

"In the beginning, we thought somebody was playing cosmic tricks on us, jokes, you know," Uri cuts in. "So we checked these things. I thought for a while that Andrija was playing tricks on me—until I met the generals, and people were introduced to me, and I saw he is serious; this guy is serious."

This mysterious taped voice of "Spectra" (the same name as an RCA computer series) supposedly originates from a spacecraft "fifty-three thousand sixty-nine light ages [sic] away." Other communicating computers and voices from outer space that talk to Puharich and Geller are called "Rhombus 4D" (it "ordered" Puharich to write a book about Geller) and "IS," Puharich's term denoting "Intelligence in the Sky." With an unrestrained sense of public relations, IS once commanded: "Do a movie on Uri." To date, Puharich has published a book about Geller

and there have been discussions about a possible full-length feature movie, appropriately produced by the same Hollywood team that made *Jesus Christ Superstar*.

"The first time it [extraterrestrial communication] happened I was actually doing some hypnosis experiments with Uri," explains Puharich, a highly skilled, long-time worker in Mesmer's mind control techniques. "I told him [under hypnosis] he has to know who he is and to be cooperative and try to bring these [extraterrestrial] things out. Uri said a lot of these things himself under hypnosis. Then, when he came out of it, I started playing the tape back for him."

Turning to Uri, Puharich asks, "Remember that night? Do you still remember? He grabbed this tape and punched the cassette reject button, took the tape out, grabbed the tape, and it just vanished—poof, gone."

"Everybody saw it," Geller adds excitedly. "There were intelligence people there, army people there, everybody. Then I didn't know what was happening with me, because he [Puharich] was the one telling me these things exist. I didn't believe Andrija for a long time after that."

Puharich forces a hollow laugh at Uri's last statement. "He thought I was pulling his leg."

Puharich claims that extraterrestrials from a distant planet named Hoova tapped Uri when he was only three years old to become a future messianic world helper. Their mysterious initiation ceremony completed, the aliens then programmed Uri to forget their transstellar interference. It was not until many years later, in Israel, that these other-worldly personages chose to reveal themselves, believes the doctor, because mankind was on the brink of world war. The Hoovians wanted to alert mankind to an impending attack upon Israel by Egypt, an attack that would have precipitated another Mideast conflagration, drawing in major world powers, according to Puharich.

In the midst of his investigations of Geller's psychic powers, a vision came directly to Puharich and told him that the Egyptian attack would take place on December 26, 1971, at Dakashem (the four-thousand-year-old name of the modern Egyptian town of Khashem El Galala). Such is the doctor's written account. In conversation with me, he claims that he and Uri "saved Israel" with this precognitive intelligence revelation.

With a hushed air of confidentiality, Geller picks up the story: "They [Israeli intelligence] know that I'm real. Then [December, 1971] Israel was in a very big crisis, maybe a war, maybe not a war. Andrija was asked directly by the chief of intelligence, who is now Mr. Yariv . . . he was chief of intelligence and now he's Golda's Kissinger.* Andrija got to Yariv and Yariv asked him, 'What can Uri do with his powers?' I told him, 'I want nothing to do with the government, nothing.' But Andrija said, 'You're in Israel; you are an Israeli. You've got to help them.' I cannot tell you what we did, but we did such incredible things that they [Israeli intelligence] started suspecting . . . they didn't know how . . . [here, Geller's voice squeaks with juvenile excitement] they thought Andrija was the chief of spies in the world." According to both Geller and Puharich, their apartments were bugged, their luggage was searched, and people followed and even interrogated them.

"Spies are running after us all the time, John," Geller continues in his breathy voice. "I mean, people are trying to see what we are doing all the time. I'm sure this house is bugged . . . I don't know by who—from the CIA, from the FBI, the Israeli intelligence. I wouldn't know who they are, but I am sure there are people who are tracing us. They're worried about some big thing we did there [Israel]."

"I'll give you an example. They were bugging us, but every time they finished the story, they bring out the tape and the tape was *empty!*" Geller jumps up, shakes his two fists in the air, and shouts dramatically, "There was nothing on the tape! I've been told that. They were very serious about tapes. So they didn't know how the tapes are being wiped out. Now, I didn't wipe them out, and neither did Andrija. Then who *did* wipe them out? Listen, these are serious guys in intelligence, taping things that might be a matter of life and death. Sometimes things stand on tapes—evidence. Nothing came through."

Puharich was uncomfortable. "Uri, we're saying things we shouldn't be talking about, right? Would you do something just to assure us that we're not transgressing our confidence?"

* Aharon Yariv later became Minister of Information and resigned early in 1975.

"Look, I'll tell you the truth, Andrija. Before you started talking I looked at his tape recorder and I just thought it was going to fall down and break because we're not allowed to say what we are saying. Nothing happened. I looked for something to happen—I wanted something to happen—and nothing happened." If the intelligences from Hoova have not intervened with my tape, Geller concludes that "they" must want me to learn of their presence.

"Once when I told Andrija, 'I don't want to go to SRI because I don't feel like it,' Andrija said, 'God damn them, fuck them.' And as he finished saying that, the big grandfather clock that was standing there flew and banged into the door and broke completely. It's downstairs in pieces now. I thought the whole door was torn apart—you can go and see the marks there—like a force picked the thing up and tossed it on that door. And I said, 'You see, Andrija?'"

The anecdotes are never-ending; one follows another pell mell, without hesitation or the slightest betrayal of cautious testing, to see how the listener might swallow such a tale. The two of them work back and forth, like well-matched jugglers, passing the story between them with an enthusiastic deftness that defies interruption or contradiction. In the end, Geller and Puharich have the listener playing their game, couching questions in terms of their experiences, their realities.

I was beginning to feel more and more like Lewis Carroll's Alice. Each time I managed to get some astounding Geller anecdote tucked away in my rational mind, up would pop another brain-rattling tale. Just when I felt I could understand how such a story might have been generated, without resorting to supernatural happenings or fabrication, the Geller/Puharich reality would twist itself around and look into my face with such a puzzled expression that I could not help but burst out laughing.

But laughter, or skepticism, provokes Geller into harsh response. He quickly becomes affronted at the least hint of belittlement, putting on a furious pout if someone dares not to accept fully one of his anecdotes. During the interview he made clear that there was always the threat of his getting up and stomping off. As a result, one hesitates to approach Geller frontally with questions of logic and common sense for fear that he would just move off, demanding

acceptance on his own grounds. It all makes for a very difficult game indeed.

Then there is the matter of flying saucers, central to much of Geller's tale. He recounts several instances in which he and Puharich saw Unidentified Flying Objects (UFO's) in Israel and elsewhere. Like the disappearing tapes, no one else—even if they were present—saw what Geller and Puharich claim to have seen. Again the audience is at the mercy of the extravagant word of these two men.

On one occasion, Geller went rushing out of a Tel Aviv apartment into the night, dragging Puharich and a female friend with him, insisting that they were headed toward a UFO rendezvous. Driving madly into the suburbs, Geller stopped the car when the sound of "chirping crickets" caught their attention. Across a vacant stretch of land all three saw a flashing blue light. Geller warned the others to stay put. He approached the flashing light, which was disappearing behind a depression in the ground. A few minutes passed, then Geller reappeared, carrying the filler cartridge to Puharich's pen—which Puharich says "dematerialized" a few days previously.

Always at the ready with tape recorder or camera, the psychic researcher says he filmed Geller striding toward the flashing blue light, but, alas, the film cartridge, along with the tape cassette record of Geller's UFO impressions, "vanished."

Twice flying saucers buzzed a commercial airliner in which Uri was flying. "The first time I was flying back from here—you better believe me, John, I have no reason to lie. I was flying from New York back to Germany. And I was looking out a window and I said, 'God, if they are so intelligent and everything, they can hear me and know everything that I think. Please, God, make something appear.' And the split second that I said it, it came flying, you know, about four or five miles outside."

What Geller says he saw was a "wobbling, wiggling, wog-gling" dark ellipse-shaped object. When the plane landed in Amsterdam, Geller rushed up to the pilot to ask if he had noticed any strange happenings about two hours out of New York or if a plane had passed by. The pilot had seen nothing.

As if to move on to more substantive evidence, Geller launches into another UFO anecdote, telling how one of Puharich's cameras "levitated" aboard an airline flight from London to Germany (November 4, 1972). Grabbing the camera, Geller pointed it out his window and snapped four or five exposures, though he recalls that he saw absolutely nothing unusual at the time.

Immediately after arriving in California, the pictures were developed. The team of researchers at SRI was astonished to find three dark objects on the Kodacolor prints. They were "clearly flying objects," says the psychic, adding in confidential tones that SRI photoanalysts examined the pictures and declared them authentic. "They have no explanation for it." Mysteriously, the negatives to Geller's UFO pictures were stolen out of an envelope on Hal Puthoff's bedroom dresser, leaving just one fuzzy print behind. Puharich's typical drama-heightening judgment is that "they either vanished [dematerialized] or ARPA* has them."

Some well-needed perspective is added to this tale by Puthoff, who first of all states that no formal photo-interpretation was conducted on the UFO pictures; they were simply shown for five minutes to a friendly UFO researcher accustomed to seeing such photographs. "The only conclusion he could draw," says Puthoff, "was that it was not obvious that they were faked." Upset at their being stolen, the SRI researcher adds realistically that "Geller could have stolen them from me, or perhaps one of his buddies did, without his knowing it. You never know."

Striding over to a polished desk cabinet, Puharich takes out a brown manila envelope containing the set of enlarged UFO prints and passes them to me for inspection, uttering a single, drawled word: "geenuuwine." Geller slides across the couch to where I sit, examining with me the three fuzzy, dark, oval blobs at the edge of each picture.

"John, let me show you something," says Geller, pointing to the images. "They checked this picture, I don't know

* ARPA stands for Advanced Research Projects Agency, the secretive Department of Defense organization responsible for following "far-out" science and technology. A special ARPA team later traveled to SRI to investigate Geller. See Chapter Nine.

where and how, but there was nothing out here when I shot this."

"Why did you shoot, then?"

"Because the camera levitated to me. They checked this picture thoroughly, expert photographers, and they have ways, hundreds of ways, of faking UFOs and all sorts of things. I wouldn't dream to do a thing like that. I knew that something was going to appear. Either my mind put it on the film or actually they were outside."

In the cold light of retrospective rationality, such declarations seem totally outlandish. But if nothing else, grant the Geller/Puharich duo one talent, at least—a genius for creating a psychological intimacy conducive to belief in almost anything. Then again, each word might be true . . . couldn't it?

One of Geller's oft-repeated talk show tales concerns his vow to return astronaut Edgar Mitchell's Mauer camera from the moon. While Geller was at Stanford Research Institute, he bragged to Mitchell about teleporting Puharich's camera case from the doctor's home in Ossining to Tel Aviv. "I challenged him in a fit of pique," explains Mitchell. "I said, 'Geller, if you're so damned smart, why don't you bring back my camera from the moon?'" The camera, which was jettisoned from the lunar module prior to returning to earth, carries a NASA serial number.

Not the least bit nonplussed, Geller agreed to the challenge. "One day when I'm very strong I'm going to work on it and it's going to appear. I know I can do it."

Mitchell seems more embarrassed than intrigued by Uri's extravagant vow. "It's of no interest to me now; there's been so much talk about it. Someone could have totally duplicated that camera, sprinkled it with a little radioactivity, and faked it. I wouldn't verify now that it wasn't a hoax," declares the former spaceman.

Shortly after issuing the camera challenge, a somewhat similar Geller-portation did take place, which Mitchell believes was authentic. One day in the SRI luncheon cafeteria Geller was coolly downing his second ice cream dessert. "I was eating it when suddenly I felt something in the ice cream, like metal," recounts the young Israeli. "We cleaned the ice cream off the metal and saw that it's a piece of a broken tie clasp. We all started saying how odd, how many

chances that it could get into my ice cream, like a million to one." The tie clasp appeared to be cleanly cut in half, with part of it missing.

"My God!" exclaimed Mitchell, after examining the clasp.

"What's wrong?" inquired Geller.

"Well, about three years ago I got a present from Bear Archery Company when I did some advertising for them," explained the startled Mitchell. "They gave me a pin exactly like you have in your ice cream."

"Mitch was so happy," continues Geller. "We all went back to the laboratory, and as we entered the lab, through the air comes from nowhere . . . falls the other piece. So we put it together and they match, and Mitch says, 'That's it. This is my pin that I lost three and one-half years ago!'"

Still partially skeptical, Mitchell said, "I wish they [the Hoova persons, thought responsible for these goings-on] could bring something back we could be one hundred percent sure about."

Just then, continues Geller, "We hear a clunk." There on the floor between Mitchell and Hal Puthoff is another tie clasp, this one pearl-headed.

"This is mine!" exclaimed the amazed astronaut. "I lost it four years ago." Mitchell later confirmed to me that his brother had bought the tie pin in Japan and had given it to him as a gift. The retired navy captain immediately recognized it by his old brass navy clutch pin on the back, which he had substituted for the original silver one that had been lost. Mitchell voices no doubts that both "rematerialized" tie clasps are his, lost in Houston several years before he even met Geller. He refuses to consider the possibility that he could have been hoaxed, reasoning that he had long since moved from his home in Houston before he met Geller or made public his interest in paranormal happenings.

"That sort of thing is anecdotal material," admits Mitchell. "But to me, I *know* it happened. And I know where those things were and weren't." A hoax, he stiffly maintains, would have been "totally impossible. That, coupled with a dozen or so other appearances of items, put it totally beyond the realm of possible conjuring or a magician's sort of tricks." Continually lecturing on behalf

of his Institute of Noetics, Mitchell always hauls along a small plastic box inside his briefcase; it contains two carefully wrapped tie clasps—the ex-astronaut swears that they materialized before his eyes from regions out of present time and space.

"Big things are going to happen to this planet," predicts Geller, "soon, very soon. Who could have brought Mitch back his pins? Who? What? I can't explain my powers—for years things are missing; now they're flying back. I don't see me as a psychic, bringing cameras back and . . . no, I can't bring a camera back—the Force is going to bring a camera back."

"You're an agent through which that Force works?"

"Exactly. That's it. I don't say there are no psychics, you know, that do things and tell you the past. I don't think I'm a psychic, you know. I don't think I'm an outer spaceman, either. Somehow, powers generate to me. John, listen, when I do something it's not me doing it."

One of Geller's outs, when his telepathy or ring-breaking is not going well, is to fall back on the explanation that the Force does not want the event to happen. "They" control whether he works or does not work successfully. "We're like prisoners inside of earth," adds Puharich, "and there's something out there. Somebody raps on the wall. We don't know what they look like, who they are, or represent. It's actually that kind of situation. Let me put it this way: I think that man has been—as Charles Fort says—'property since the beginning of time.' You look at the Bible and read between the lines, and it's all there; it's been revealed over and over again. It's just another time for revelation, that's all."

Puharich's low, sleepy voice drones into near inaudibility. He sits to one side of the room, playing the role of sage, a modern-day Tiresias, seemingly blind to his bizarre beliefs.

"If I'm a scientist and I have a nice laboratory and I have a whole stock of animals—guinea pigs and rats and bacteria—and I genetically control everything, generation after generation, the rats are happy eating away, having their little sex life and playing little games . . . the whole thing is being managed by somebody who knows something about genetics. In the same sense I speak of the manage-

ment of all living things on this earth, stretching out over millions of years—I don't think it started yesterday. It's not only going on here, but it's going on in millions of other planets. The big question for man is how do we contact the 'program manager' and how do you establish contact between different points in space, different systems. The only way you can do it is to monitor people like Uri, who goes there."

Earthlings are nothing but extraterrestrial pets, according to Puharich's vision of reality, and they are cared for as one might care for guppies in an aquarium. True, it makes a moderately interesting, albeit cliché theme for science fiction writers. But as an assertion of the truth . . . I figured it was time to start looking for the exits.

Geller's own evaluation of why the extraterrestrials came knocking on his door runs counter to most popular accounts, even Puharich's. "We are helping 'Them' somehow," insists the Israeli, "not 'Them' helping us." Even though the Spectra civilization, according to Geller, is far in advance of our own, their contact with earth culture was made to benefit them, not us. There is no choice but to accept the responsibility such an other-worldly contact places on you, continues Geller. "You can't back out of it. We can't say, 'Listen, guys, leave me alone, I'd like to fuck around swimming, and with women, and have a beautiful boat and go sailing.'" But, deep down, that is exactly what Geller appears to want to do—in addition to making piles of money and having his name in lights.

Puharich tells me that he and his protégé have discussed the possibility of using psychic powers as a "tool for exploration of the universe. One of the problems we have is to explore the universe we live in. How do we get there to explore? We have the telescope, satellites, and so on. But how about the mind? It might be able to go across light years in a matter of seconds and deliver information that is reliable, testable, and checkable. And then there is the whole concept of moving forward and backward in time instead of patiently digging out artifacts and reconstructing history, having people with minds who are trained to do that sort of thing . . . we have little smatterings of those powers here and there and people who are going to reconstruct history or reconstruct events. That, to me, is going to be a

whole new area that's going to open up. I'm totally convinced."

"You seem awfully calm about all this," I counter.

Puharich smiles benignly behind his bushy mustache and quietly, hypnotically, responds: "I've gone through an enormous educational process. Uri and I have seen thousands of unusual things. It's happened over and over again, so that even a donkey would know it's true. So I'm calm because I feel an enormous responsibility to first take care of Uri—to properly introduce him to the right people, to see that the message being conveyed to him gets to the right people to start changing the world status. Uri and I know that we just have a mission, that's all."

These conjurings of extraterrestrial meddlings that Geller and Puharich implore me—and the public—to accept seem suspiciously familiar, and they could have been culled from an anthology of best-selling science fiction. Like a parade at the annual sci-fi masked-ball, these characters and cult books continually march in and out of the Geller narrative, consciously or unconsciously interlacing fiction with alleged fact: Robert Heinlein's *Stranger in a Strange Land*, the account of a gifted visitor from Mars, Valentine Michael Smith, whose strange "grokking" powers lead to earthly cult worship; the beneficent Overlords of Arthur Clarke and their omniscient missionary, Karellen, who guide the earth toward *Childhood's End*, and a Chardinian leap into the future; Colin Wilson's *The Philosopher's Stone* and *The Mind Parasites*, both of which deal with the ability to reach psychically into the past, and Olaf Stapledon's classic, *Star Maker*, the tale of a donnish Englishman who mentally explores the universe, traveling through time and space, telepathically uniting in a psychic community of minds.

Another parallel turns up in Puharich's earlier book, *The Sacred Mushroom*. In it, the doctor writes of bringing a Mr. Gallow up to his Maine laboratory for study.

Puharich was fascinated because Gallow had a very small talent for telepathy but had an enormous talent for gaming. Trickery, not psychic ability, was the quality Puharich admits he wanted to study in Gallow. His purpose? To outfox the fox.

Could similar motivations originally have prompted

Puharich's work with Geller? Or does he fully believe the Geller mythos? One long-time Puharich friend, intimately familiar with his parapsychological and medical research, flatly declares: "I think Andrija believes the whole extraterrestrial intelligence [ETI] story. Never before have I ever known him even to stretch the truth." The friend, willing to grant Puharich every benefit of the doubt, once challenged him as to whether the ETI story was simply an analog that reconciled the enormous psychological strain on Geller, a strain produced by the realization of his alleged powers. Puharich flatly denied the analog possibility, declaring the entire saga to be absolute truth. The friend sees Geller as having a weak, ill-defined ego that constantly requires reinforcement and support. Doing his psychic tricks, he displays a childlike petulance when faced with skepticism. A successful display of powers sends him into hooplas of enthusiasm. The story of the extraterrestrials simply may be a way of rationalizing his strange powers. "The Spectra story is a way of not taking responsibility for his actions," says the friend, who insists on anonymity. "Andrija takes the concept of other-worldly intelligence seriously," continues this close source. "He hopes to taste it and touch it, when really it is an analog of something else."

Could drugs have played a part in altering Puharich's judgment of the Geller reality? "You name it [drugs], and he has done it," says this informant, suggesting that drugs may play a part, but a minor part. "Andrija simply is not used to dealing with a sensory reality that is not real, like in India, where funny things happen every day. But no one there invokes extraterrestrials."

The Geller experience definitely has changed Puharich. Shortly after meeting the Israeli psychic, his third wife divorced the scientist, telling friends that Geller was all Puharich could think about. "You know what my husband told me?" Anna Puharich confided to a *Washington Post* reporter. "He told me, 'It's people like you who crucified Christ.' That's when I left."

This dramatic change in the doctor's personality was noticed by another long-time close associate. "Three years ago Andrija was an absolutely straight scientist. His hair used to be cut like the army would like it, and he'd wear dark suits and a vest. I saw him after he began working

with Uri and I said, 'My God what is this?' The metamorphosis was like day and night. Now he wears high-heeled purple platform shoes and his hair looks like a bush. All this coincided with his discovery of Uri."

Vagaries of personal style and cultural fashion certainly should not be laid to Uri Geller's blame. But the relatively conservative Henry K. Puharich did indeed blossom into the dashing, mysterious, seductively voiced Andrija during the course of his association with Geller, all of which should be weighed in the ultimate assessment of their joint tale.

There is another aspect of the Puharich/Geller relationship that requires assessment, particularly as it may throw light on the extraordinary story of Hoova that Geller tells: Uri may have been hypnotized into believing it.

Andrija Puharich is a known expert at hypnotism, particularly talented in the use of the potent techniques of age regression (making a hypnotized subject retreat through his memories to a younger age) and post-hypnotic suggestion (the implanting of a command to be carried out after the subject has awakened from his trance).

Someone who has first-hand knowledge of hypnotic techniques and also knows intimately the details of the Puharich/Geller relationship flatly asserts: "Andrija used hypnosis to gain control of Uri. Andrija, in effect, said that to me. When I asked him how was he going to manage such a high-strung young sensitive, he said, 'I took care of that during the hypnotic sessions with Uri.'" Puharich's confidential admission that he programmed control over Geller in his numerous hypnotic sessions places even more suspicion on the tale of extraterrestrial influences, and it severely damages the credibility of the entire Geller story.

Eerily, the situation with Geller recalls an experience recounted in Puharich's book, *The Sacred Mushroom*, published in 1959. It deals with his investigations into Harry Stone's alleged ability to fall into deep trances during which he could communicate ancient Egyptian mysteries. Stone would write in hieroglyphics and speak in the tongue of an Egyptian alter-ego named Ra Ho Tep, offering information about sacred mushroom cults in the land of the pharaohs. This was the same time that Puharich was ex-

perimenting with hypnogogic "magic mushrooms" to induce such trances.

The similarity between Puharich's observations with Stone and those with Geller are curious, if not outright uncanny. "I feel that Harry is under a powerful influence when he writes in hieroglyphic. He appears to be a machine responding to a master control. I wonder if he could be under intelligent control." Puharich wrote these words ten years before he ever heard of Uri Geller. Yet the scientist proposes almost identical explanations to unravel both their strange tales.

The lineage from Ra Ho Tep to Hoova may not be all that remote.

"He is a very little fellow, that's true, and would do better for the *Théâtre des Variétés*."

"There can be no doubt of that," I replied, unwittingly, and not at first observing (so much had I been absorbed in reflection) the extraordinary manner in which the speaker had chimed in with my meditations. In an instant afterward I recollected myself, and my astonishment was profound.

"Dupin," said I, gravely, "this is beyond my comprehension. I do not hesitate to say that I am amazed, and can scarcely credit my senses. How was it possible you should know I was thinking of —?"

—Edgar Allan Poe,
from *The Murders in the Rue Morgue*

A PERSONAL AUDIENCE

INTRIGUING AS ALL THE CHIMERICAL STORIES OF FLYING saucer visitations, extraterrestrial messages from Hoova, and military intelligence coups might be, I was anxious to get on with the chief purpose of my mission to Puharich's magic castle that day—to witness Uri Geller's vaunted psychic prowess. About an hour had been consumed by Geller's ingenuous courting, a conversation filled with charming patter and imaginative anecdotes. Whatever his other powers might be, Uri does have the talent to establish rapid rapport and a mood of believability. Quite simply, it is damned hard not to like the guy, and he knows it, an invaluable trait.

Puharich excused himself from the room. Until now he had been an active overseer of the conversation, guiding and prompting his protégé—generally with just a phrase or two—throughout the psychic's magical mystery tour of his origins. Obviously, the doctor had seen enough of Geller's stunts, as had Shipi and Hannah, who both had long since retired from the scene. It was just Geller and me, *mano a mano*.

Twelve hours later, I was certain that I had seen *something* happen during my presence—but just *what* remains a puzzle even now.

Uri first tried several attempts at telepathic communication by using numbers, colors, capital cities, and geometrical drawings as targets. Most of the time he would try "viewing" the target I chose, though he occasionally wanted me to guess a number "passed" to me by him. None of these telepathic efforts was overwhelmingly successful.

But the celebrated "Geller effect" apparently was. Dur-

ing that day's long personal audience, Geller succeeded in either breaking or bending three items: an ice cream spoon; my nail clippers, and a fork. It was the bent fork—which continued to bend while out of Geller's reach—that impressed me the most and still does.

Beginning with telepathy—"to see if I can get with you"—Uri turns his back to me, hunches over on the couch, and covers his eyes with his right hand, reminding me of the see-no-evil monkey. I write down "9" in response to his request to pick a number from one to ten. There is a notable change in his voice, a shift from the youthful hyperkinetic exuberance to dramatically lower tones, lulling, persuading, full of assurance and certainty. Yet nothing happens. An hour passes in growing frustration, without his "seeing" any of the numbers or other targets that I have written down. Crumpled bits of note paper lie scattered across the hardwood floor like giant spitballs gone awry.

Again I write down a series of numbers: this time "3," "8," and "2."

"You have it? Cover them," commands Geller. "John, by the way, I'm not guessing; I'm trying ways to reach you, and I'll reach you somewhere. Now, start passing me the last one you wrote." Several seconds lapse. "Repeat it."

Forty seconds go by, each of us staring intensely at the other. The silence is broken only by sounds of lunch preparation. Uri mumbles a Hebrew curse, then quickly follows with an apology. "You don't mind doing it until I get it, do you? You're very strong. That means you're passing me the number, but I am getting a couple of numbers." But Uri's request for my forbearance is to no avail. After several more unsuccessful tries, he jumps up and stretches. Attempting to conceal his embarrassment, he explains that "when things like this happen in Israel, I just switched to talking, speech, no demonstrations, and people would understand. I would tell people, 'It's just no good, it [just] happens.'"

Does a bad night's sleep or illness inhibit his ability to psychic successfully?

"No, I don't think that to be good I should go to sleep early and wake up late . . . well, if you have a headache,

that's different, you hurt," responds Uri, denying that special preparations or physical training stimulates his psychic talents. "If I have it, I have it; if I don't, I don't."

But on those days when he does not perform well, does he feel any difference in his physical or mental well-being? Uri has no answer for that; instead, he reverses the line of questioning, saying that the person he is working with sometimes blocks his ability, either by outright skepticism or "because they are very strong in something themselves."

"Strong in what?"

"In something, you know. They know something, they have a lot in their heads." In other words, they, too, have psychic powers.

The failure to produce any telepathic play with me leaves Uri despondent, and he draws inward like a petulant child. As the pleasant, ingratiating showman, he exuded a contagious warmth. The abrupt change is embarrassing for both of us. Pleading fatigue, he vanishes up the stairs to his room.

About a half hour later, as we were setting the table for lunch, Melanie confided to me in a hushed voice that Uri was extremely upset. "He is so disturbed that he cannot do things for you," she said, "that he is actually crying." After what Geller had said about my "blocking" him, I was left with the feeling that it was all my fault, that I was about as welcome as an atheist at a church picnic.

The simple hamburger lunch was subdued. At the head of the table sat Puharich with nothing in front of him except a glass of water, which he sipped with deliberate slowness. He explained that he was fasting, taking only liquids. "I'll do this every once in a while, for four or five days. It cleans me out." He smiled one of his frequent raconteur grins. The conversation settled on the attitudes of various people and organizations toward psychic phenomena, with Geller seeking repeatedly to find out how he was regarded. He could not comprehend why he was not immediately accepted by everyone for what he claimed to be. Hannah and Shipi remained quiet, except for an occasional word of Hebrew with Geller. Although Hannah traveled with Geller—ostensibly as his girl friend—the two of them displayed no outward affection or emotion toward one another. Friends though they were, the relationship be-

tween the three young Israelis seemed strictly professional, bringing to mind the image of a classic European trapeze act, each member dependent upon the other, but grudgingly so, carefully hoarding their secrets for mutual survival.

Puharich launched into a discussion of some of the exceptional people he had studied, including the Brazilian healer named Arigo. By this time, dessert had been served—dishes of vanilla ice cream. Geller, seated directly to my left, was quietly downing his as the rest of us listened intently to Puharich's account of an Indian holy man, Sai Baba. I had never heard of him, though it seems he is common table talk for anyone with occult interests. The middle-aged Indian sage is a famous faith healer and psychic surgeon, counselor, and worker of miracles, according to Puharich, and he is known for materializing objects out of the air—rings, bracelets, necklaces, photographs, and peculiar holy ashes called *vibhuthi*, which smell distinctively of incense and taste pungently sweet—a remarkable tale.

Suddenly, Geller interjected: "I can do anything Sai Baba can do."

Simultaneously with these words, Uri raised his spoon as if to take another bite. "Look, look!" he cried. His left hand held only the spoon handle—the decapitated bowl remained buried in the ice cream, cut off at the narrowest part of the throat. We had just witnessed one of the frequent, randomly occurring "Geller effect" events.

"I knew I shouldn't have said that!" shouted Geller, referring to his challenging remark about Sai Baba. "They heard me."

Immediately there ensued a runic discussion among Geller, Puharich, and Melanie over how to interpret the broken spoon. Was it meant as a rebuke by Geller's "big controllers in the sky" for his spirited egoism? Or was it an affirmative signal, indicating that "They" were still with him, that Uri was indeed as powerful as Sai Baba? The group tended to assume the latter, but either way was a plus in the eye of an onlooker, since very few are suspected of receiving extraterrestrial scoldings. Laconically, Puharich noted that events of this nature were always occurring when Geller was present. A big restaurant dinner party

might leave five or six pieces of severed cutlery in its wake. "Things just happen," he explained.

"Did you see that? Did you see that!" bubbled the once and future champ of psi, now back in form. Charged up because of his lunchtime success, Geller had too much energy to go directly back to a sit-down interview, so he suggested a game of Ping-Pong on a table in the basement. With Hannah and Shipi as the mummer's gallery, Uri and I warmed up, then lit into a full-blown game of Ping-Pong scramble. To his frustration, Uri found himself losing. But the broken ice cream spoon continued to tide over his confidence, and after several games he suggested that we move back upstairs. "I've just got to convince you, John," he kept insisting.

The large den where we had spent the morning had been filled with sunlight and had given off a feeling of bright polished yellow oak. It was an open, warm, receptive room off the main entrance hall. In direct contrast, the living room to which we now walked was cool, shadowy, filled with purplish-brown hues, and seemed to hum with a quality of quiet reflection, like burnished ebony. The den had been an active, shamanistic setting; the living room was passive and yoga-like. If minds were to meet, here was the appropriate setting. Geller flopped into a large easy chair against one wall, and I relaxed into the corner of a sofa about eight feet away. My back was to a wall; none of the others was with us.

Geller wanted to start off with a change in procedure. Instead of trying to read a number in my head as before, he suggested that I try to discern something he was thinking. He was going to project to me the image of one geometrical figure inside another. I was to draw what my mind's eye "saw." Staring directly into my eyes, Geller ordered me to sketch what he was passing to me. I tried. He tried. For several minutes. I could think only of a few combinations, so I ended up sketching a square with an "X" inside, connecting each of the corners, like this: . Certainly no flash of telepathic inspiration stimulated the image, at least none that I could tell.

"Let me see what you have," he said, reaching out to examine what I had drawn, positive that we were in com-

munication this time. Upon seeing the pad Uri frowned, mused a few seconds, then handed it back to me without comment. "Here, again, once more we'll try it. A geometrical figure, right under here, within a geometrical figure, and I'm going to try to project to you a geometrical figure." I had not seen what he supposedly had drawn on the first try, but I did not mention it. The square and lines were obviously not what he had tried to "send."

This time I closed my eyes and concentrated hard. "All I see is a figure I thought of earlier," I told Geller in exasperation after several seconds of silent contemplation.

"What you see, put down."

I drew a circle with an equilateral triangle lodged inside it and skeptically handed it over for Geller's perusal:

"Fantastic!" he whispered. "Look what I did." He had drawn a triangle with a circle inside: . "You got it the opposite way—very interesting." His words were uttered in the hushed sacredotal manner in which a priest gives communion. Even though the figures were reversed, he took my drawing as a hit—a correct transference of telepathic imagery.

Back to number guessing, again without success, and Geller seemed genuinely mystified over his failures. Curiously, I was beginning to feel responsible, like the classic Goofy character too insensitive to be hypnotized.

Shifting strategy, Geller handed me some large notebook paper to replace my pad and drew a large rectangular "screen" on the top sheet. "When you write another number, please make a screen around it afterward, and see it with a screen," he instructed. Several tries later and we still had no telepathic hits. With the exception of the broken ice cream spoon, the day had been a total psychic bust. Increasingly worried about his failures, Geller suggested we try some metal bending.

We moved back to the den, where I had left my briefcase with some samples for him to try. I pulled out my hotel room key and handed it to Uri. After a quick look, he decided, "No, I don't feel for it," and handed it back. Not quite sure what he meant, I hunted for something else and dug out a small, collapsible nail clipper with a foldout nail file attached to it. Geller gave it a cursory examination

in his hands, then laid it to one side on the glass coffee table in front of us and asked for something else. I offered up a key ring with several assorted keys attached to it, but he said that they might be too valuable to bust up. Perplexed, I wondered if I should have stopped off at Tiffany's and collected a few silver trousseau items to use as experimental fodder. I had been told that Uri—at his best—breaks silver faster than an ouzoed Greek smashes bouzouki dishes.

While I rummaged deep within the folds of my briefcase, Geller called out, "Look, the nail file is broken," and he triumphantly handed me the clipper. It had been set aside and forgotten—by me, at least—for several minutes. True enough, the tiny nail file was severed from its circular swivel. Curiously, Geller was not jumping for joy. He seemed to offer up the broken pieces to see if I would accept the feat.

"Uri, how the hell do you expect me to swallow that? I didn't see you do it; in fact, you said that you weren't even going to try. What gives?"

He did not argue. "Let's try the numbers again. I think I have my powers."

Just like that. No excuse. No regret. No wounded feelings. He leaped off the couch like a watermelon seed being shot from between the fingers and settled again in the distant living room. I was left with the broken nail clipper and a growing suspicion. Still, I held back. There is an intense psychological pressure on an openminded person—more on a dedicated believer in psychic phenomena—not to burst the bubble of belief while in the presence of a sensitive. People in civilized society seldom choose to dress down a person face to face with the epithet "liar." We are too polite, preferring euphemisms or tactful skepticism. So, biting my tongue, I followed Geller back into the living room, where we both took up our former positions. After several more attempts at number guessing, Geller appeared to be getting more receptive—or perhaps I was getting sloppier in how I drew the numbers. The procedure was becoming almost code-like in its brevity, so practiced were we. And on we went, throughout the afternoon, attempting to guess numbers, countries, drawings, but with one lone success.

Then Geller suggested that we again reverse the procedure. He would try to pass me numbers. Using the same verbal routine as before, we started hitting. Time and time again he would say a number had been chosen and drawn on his paper. I had my back turned and my eyes closed. Then I would turn and he would "pass" the number to me. I wrote down the first number that popped into my head. Geller would turn over his paper and the numbers would match. We had a few misses, but the vast majority—about ninety percent—were accurate. There was an eeriness to the scene. Roles had been reversed. Geller, the psychic, was sending thoughts to me, a non-sensitive. Whatever he was doing was impressive. He was delighted, letting out tiny whoops of joy whenever we scored. At the time, all thoughts of devious trickery had been wiped away by the fact that I was the one involved in the active side of the telepathy. I did not question my own veracity. That made the experience all the more powerful. Something was working—something strange and stirring to the elemental psyche. Geller had me right where he wanted me. I was beginning to believe.

Could I have been partially hypnotized? That is not out of the question. I was certainly highly suggestible after the reverse telepathy began to work. After all, here was Geller with his ingenuous pitch, backed up by Puharich, Mitchell, and other scientists—the mental set was one strictly biased in his favor. Forget what had gone before—the fizzled-out number passing to him, the non-bending, even the highly suspicious broken nail clipper. The mind filters out experience contrary to its expectation. I unconsciously tossed out all the demonstrations gone awry, retained all the verbal hucksterism, then latched onto a single set of demonstrations to confirm my expectations. Whatever he is or is not, Geller certainly commands my respect as a supreme manipulator of human psyches.

Sensing his growing control over me, Geller urged that we stop playing around with the number guessing and return to his metal mind-bending. I eagerly agreed. So, back to the living room and the glass coffee table. On the way he picked up a few forks from the dining room table. From all appearances, these were from the same set of Japanese stainless steel utensils as the spoon that had been broken

at lunch. Shipi joined us. Geller explained that "he gives me energy." Again seated on the couch, he clenched his left fist and placed it directly over the neck of the fork so that the bottom of his hand was held about half an inch above the fork. In a vivid show of concentration, Geller scrunched up his brow, clenched his fist, and stared transfixed at the portion of the fork he was trying to affect.

"Bend, bend, bend" are the words I repeat over and over to myself," Geller explains. I hold the fork as still as possible, eyes only about eight inches away. "Do you feel anything? Any heat?" questions Geller.

"Nothing," I reply.

He continues to direct his clenched fist at the middle of the fork, squeezing and unsqueezing as if milking water out of stone. Shipi sits idly to one side, a dreamy expression on his face. If Geller is plugging in to him for energy, I'd like to know where it is coming from, because from all appearances Shipi is undergoing a personal energy crisis. Geller continues his fist routine, but nothing happens. Puzzled, he stops, calls Shipi to take hold of one end of the fork, then continues. Still nothing.

Suggesting that he needs all of Shipi's energies, he takes my hand off and replaces it with Shipi's. The silent "energy man" now holds both ends of the fork. My eyes zoom in even closer, watching for the slightest hint of muscular pressure by Geller's helper. I can see none. Geller's fist has now opened and he is rubbing his index finger along the neck of the fork. He is clearly becoming agitated at the fork's lack of cooperation. He rubs harder and harder. Nothing. Taking the fork out of Shipi's hands, Geller examines it for the slightest bend.

"Yes, I think I see a little," he suggests.

"I see nothing, Uri."

Back it goes into Shipi's hands. This time Geller uses his index finger and his thumb to rub both sides of the neck. Almost frantically, like a shipwrecked sailor calling up a bottled genie, Geller strokes the fork, waiting for the miraculous to happen. Imperceptibly at first, then becoming barely detectable, Geller begins to press down on the fork with his index finger. Shipi holds it in his vise grip. Geller is clearly—though with great subtlety—trying to bend the fork with his fingers.

"Uri, you're using your hand to bend the fork; what gives?" I challenge.

Without missing a beat, Geller takes the fork and examines it, again suggesting that "there is a slight bend to it." He does not even acknowledge my accusation. "I just don't have the power tonight, I guess," is his only reply.

He moves right on, lest I quiz him more about the possibility of attempted fakery. Picking up two other forks, he nests them together, showing that they both have the same shape. Setting one on the coffee table directly in front of me, he has me hold the second fork. This time he passes the open, flat palm of his left hand over the fork, skimming the metal without touching it. Again the look of fierce concentration envelops Geller's face. If it is an act, it's a good one. As before, the technique is sufficient to rivet my attention on the feat he is attempting now, rather than to dwell on the shoddiness of the one that has just passed.

"I think it's beginning to bend!" Geller says excitedly. The fork does indeed appear to have a slight upward tilt to its handle. By God, he had done it! I had no ready explanation for it. Laughing with excitement, I congratulated him as he sprang off the couch literally jumping with joy.

"I did it, I did it! I knew I could! See! See! Now do you believe?"

We are all high with the excitement of his accomplishment. Even Shipi smiles. "It will continue to bend," predicts Geller, back to his full self-confidence.

Ripping a piece of paper from my note pad, I nested the two forks again and, using the unbent one as a reference, traced the outline of the curved fork, noting the time, twenty-five P.M. Then I immediately placed the bent fork and piece of notepaper on a window ledge about twenty feet to my right where no one could get to them. If the fork was going to continue its bending—as Uri predicted—I'd be damned if Geller or Shipi was going to get near it.

Flushed with success, Geller anxiously counted down the minutes until I again could check for further bending. The experiment fork was left undisturbed for ten minutes, after which time I again sketched its curvature, using the reference fork as a guide. Geller was right. The tip of the fork apparently had bent upward another three-quarters of an

inch. I was dumbfounded and Geller was ecstatic. Seven minutes later its apparent movement measured another five-eighths of an inch. Nine minutes later, the distance had increased only one-eighth of an inch. Then it stopped. The measurements I made later from the succession of penciled outlines showed that the total bend measured one and three-quarters inches.

No one but me touched that fork after the initial bending began—of that I would swear. Both the bending fork and the paper I measured it on were left clearly within my sight at all times, away on the ledge. Neither Geller nor Shipi ever left his seat while the measurements were being taken. However, the reference fork was left on the coffee table in front of Geller and me. Only in retrospect do I realize that he might have been able to misdirect my attention long enough to grab the reference fork and put a slight manual bend in it while I was not looking. If he had bent the handle of the reference fork *downward*, it would make it seem like the other fork handle was bending upward. Long postmortem puzzlings do not resolve the dilemma. At the time I surely did not notice any tampering with the reference fork. But, because it was within Geller's reach—though close to me—I cannot definitively rule out the possibility that he manually bent it when I was not looking. Since we were talking face to face most of the time the experiment fork was "bending," the time allowed for such a manipulation was minimal. But that is all a good magician requires.

At the time, none of these considerations crossed my mind. Cool logic does not usually prevail when Geller is around. He forces the situation, forces the mental set, forces the excitement. At the time, I believed without a doubt that I had seen a fork bent by mental powers. I believed, too, that numbers from Geller's mind had been passed to me telepathically. But he had not "received" me. No teleportations had whizzed in. No dematerializations had caused any objects to vanish. My tape recorder still worked, and all the cassettes were accounted for. My watch ran normally. My hotel key was not curved like a banana. Still, what I had seen and heard certainly seemed sufficient evidence to pursue Geller's case further.

Before I rushed off to catch a late-night train back to

New York, Geller waxed philosophic. "I know that I'm increasing in powers every year. For instance, bending an object—for two years I couldn't do it in half an hour, one hour. Today I can do it in ten minutes. Do you understand me? It comes closer and closer each time."

In confidential tones, Geller concedes that maybe he is mortal, after all. "Look, maybe one day I'll wake up and I won't have any powers; I don't know. Maybe one day I'll lose my influence; maybe one day it will just not be."

In the history of ideas a new idea is often first picked up by a crazy person, then elaborated by an artist who is more interested in its imaginative possibilities than in its literal truth; then it is picked up by a scholar or scientist who has become familiar with the idea through the work of the artist; the savant makes the hitherto crazy idea perfectly acceptable to the multitude, until finally the idea rests as a certainty in the hands of a bureaucracy of pedants.

—William Irwin Thompson,
from *Passages About Earth*

HIGH PSI-CIETY

ON A HUMID WEEKEND IN AUGUST, 1972, A CORE GROUP OF potential sponsors and scientific advisers—a kind of secret sanhedrin—gathered around the long dining room table at Andrija Puharich's Ossining retreat to judge the psychic powers of Uri Geller and to consider plans on how his talents might best be studied in the future. Ex-astronaut Edgar Mitchell, already involved with Norbu Chen in faith healing research, was one participant. The president of Kent State University, Glenn Olds, was so impressed with Uri's two-day demonstration that he offered facilities at his institution as a possible site for scientific verification. Wilbur Franklin, a Kent State associate professor of physics who has written on the theoretics of psychic phenomena—he prefers to call it “teleneural physics”—also was among the dozen in attendance. Russell Targ, the Stanford Research Institute psychic investigator, and his wife, Joan, were there, as was Judy Skutch, a whirlwind enthusiast and head of her own Foundation for Parasensory Investigation. Columbia University physicist Gerald Feinberg came up for Geller's second day of demonstrations, lending his scientific credentials to the judgments at Ossining. No stranger to imaginative hypotheses, Feinberg helped propose the concept of tacyons—theoretical, sub-atomic particles that always travel *faster* than the speed of light.

All were impressed by what they witnessed. For example, Uri broke a gold wedding band that belonged to Mitchell's secretary. Geller asked her to clench the ring in her fist, recalls Professor Feinberg, “and he passed his hands over the other person's, back and forth a few times, waving his hand over it.”

“Open up your hand,” commanded Geller.

“She opened it up,” continues Feinberg, “and the ring then appeared with a crack in it, as if it had been cut through with a very sharp instrument. Initially, there was a very small space [at the cut], probably a fraction of an inch. It looked essentially like a whole ring, but with a crack going through it. But even more interesting, he took the ring and put it down on a table where several of us were sitting. Over the period of a couple of hours, the ring twisted. It had originally been a circle with a crack in it, but over the period of two or three hours it twisted so that it went gradually into the shape of an ‘S.’ It didn't twist fast enough that you could actually see it happening, but if you looked every fifteen or thirty minutes you could see that the angle was gradually increasing.”

Geller was sitting in the midst of the group, a few feet away from the ring. Feinberg was about the same distance from it. “It didn't seem to me that he went near it during that period to do anything to it,” recalls Feinberg, “but I wasn't trying to monitor him.”

If the twisting ring was not enough to ensure converts, Geller's noontime stunners certainly finished off the job. While everyone was seated at the table, Ed Mitchell took out a stainless steel needle and jabbed it at Geller's wrist three times in quick succession like a cobra striking, making sure to keep the sharp point well short of Uri's arm. Immediately, three tiny red pinpricks appeared on Geller's wrist, all within a tight, half-inch-diameter circle, according to Wilbur Franklin's astonished eyewitness account. “To the best of my judgment, they looked like blood.” But Geller's unexplained stigmata illusion was only a prelude to an even more impressive demonstration.

Feinberg asked Geller if he could break the needle that Mitchell had used to “jab” him. “I'm tired,” responded the psychic. “Doing these things takes a certain amount of energy, and I can't do it indefinitely,” a statement that Feinberg says “certainly sounds sensible.”

As the group clustered around Geller to inspect his “bloodied” wrist, the needle was placed aside at the center of the dining room table, about a yard from Geller. Moments later Melanie Toyofuko, Puharich's assistant, called attention to the needle, which now lay cut in two. No one

saw Geller—or anyone else—touch or hold the needle, reports Feinberg. “I looked, we all looked, and I saw that the needle was split in half. I looked at the two parts and they fit together rather well. It didn’t look as if any significant amount of material had disappeared. It was a very sharp cut.” Using a wire cutter that Puharich had in the house, the Columbia physicist later tried to duplicate the cut, but the cutters left a serrated division, completely unlike the clean severing that had split Geller’s needle. Feinberg just shrugs his shoulders, at a loss for any explanation.

However, Uri’s attempts at telepathy failed to impress the physicist, who cagily observes that “it’s too easy to do that by one kind of trickery or another.” Feinberg particularly was disappointed when Geller declined even to try to guess a complicated mathematical equation in Feinberg’s head instead of his usual numbers from one to ten.

Overall, Geller scored a crucial success that weekend. Feinberg’s reaction is typical of those present: “I had never seen psychic phenomena first-hand before. It certainly is more impressive to see it before your eyes than to read someone else’s account of it. Yet, I didn’t know then, and I don’t know now, what sort of explanation to offer,” concedes the intrigued physicist, who is no newcomer to accepting the possibility of psychic happenings. Feinberg is the driving force behind the Prometheus Project, a quasi-formal effort by a group of intellectuals centered in New York to promote the humanistic belief that mankind is capable of deliberately evolving toward the Chardinian goal of higher consciousness. New ideas do not frighten the physicist, who admits that he has been “toying” for some time with a theory to account for psychic precognition, the theory being based on existing equations of physical theory.

The other physicist present at the Ossining demonstrations, Wilbur Franklin, later reported the results of a detailed metallurgical analysis conducted on Geller’s severed needle. Photomicrographs of the needle fracture were taken, using a scanning electron microscope at Stanford Research Institute (see page 112 for illustrations). The resulting pictures—up to twenty-one hundred times magnification—show the peculiar granular microstructure left by the break.

After examining these photos, Franklin and Edgar Mitchell wrote in a jointly authored paper that the fractured surface did not resemble the type of surfaces that would have been left by a common cut or by being pulled apart. They concluded—in engineer’s jargon—that there were no regions in the break “that displayed the extensive dimpled network characteristics of ductile failure”; no regions of the microstructure “that displayed a shear type of fracture surface,” and “. . . essentially no evidence of ‘necking down’ or bending and no surface strain lines or distortion along the circumference of the needle.” It was calculated that it would have taken a forty-pound load to break the needle. Stated simply, there was no conventional explanation to account for how the needle was broken.

Franklin, Mitchell, and SRI metallurgists also examined two other Geller-bent samples: a stainless steel spoon that was deliberately fatigued and broken by hand, and a platinum wedding ring, which is alleged to have been busted by mind-bending. Geller broke the spoon in the presence of Franklin and Mitchell by holding the handle between two fingers while he bent the bowl back and forth some five or six times to angles of about forty-five degrees. The resulting fracture surfaces had the predictable white lacy network of “dimpled” microstructure typical of a fatigued ductile fracture. Franklin maintains, however, that there were some unusual features even in this deliberately broken spoon, including some viscous-looking material at the bottom of a crack along its side. The Kent State physicist tried unsuccessfully to duplicate the break. “I don’t care if he was Goliath, I don’t see how Geller could have broken it [with so few bends].” Franklin admits that the evidence in this case is murky, but he still believes it is suggestive of the “Geller Effect,” primarily because of the viscous material present that makes it appear as if some of the spoon had melted.

The platinum wedding ring is another matter. It belonged to Joan Targ, wife of one of the SRI researchers, and it was broken, supposedly without Geller having touched it, by his usual method of passing hands over the ring while it was held by someone else. Following the appearance of the first fracture, report Franklin and Mitchell, “the metal in the shank of the ring seemed to soften at a

point approximately one centimeter from the initial crack." Examining the electron microscope photographs of the ring, Franklin surprisingly concluded that the ring's fracture surface resembled a cleavage obtainable only at extremely low temperatures, near absolute zero. Equally puzzling, however, is the presence of short, rounded fibrils on this surface that are typical of high-temperature melting, an effect obtainable, for example, with a powerful laser. "If we are going to analyze these breaks in terms of teleneural type of activities," concludes Franklin, "I would do it by suggesting that there were two possibilities: one, that Geller might be able to alter the properties of materials such that they will deform under gravitational forces more easily; two, he may be able to dematerialize a segment such as in the platinum ring where a crack would appear." Either possibility is staggering.

After his two days of impressive demonstrations at Ossining, Geller was escorted by Mitchell to a meeting with space pioneer Werner von Braun. At this meeting the Israeli mind-bender scored another convert by flattening von Braun's gold wedding ring and taking credit for fixing his electronic hand calculator, which had acted up during the visit. Gellerites even talk of how a pat of butter flew up from a restaurant table and splatted onto Walter Cronkite's shoulder while he was pondering an invitation to meet the psychic. Unfortunately for Uri, his powers had less effect on Guyford Stevor, head of the prestigious National Science Foundation, and an unnamed White House aide, both of whom Mitchell approached for funding. The science establishment clearly remains Geller's hardest bar to crack, and it has steadfastly refused to fund open research on him or other psychics.

That is where Judy Skutch and her Foundation for Parapsensory Investigation (PSI) enter Geller's entourage. "Perpetual manic" is the best way to describe her. In college, she could have been head cheerleader, yearbook editor, and been voted most popular, with time left over to hustle a dormitory sandwich route. Talking to her in her elegant Central Park West apartment is like conducting a chess match in a fire station with a pyromaniac on the loose—bells, bells, bells. Double phones and enough separate lines to run Manhattan Information plug her into the world. A

phone is always ringing, and one is always being ignored. Her conversations constantly are interrupted by dashes to the phones to cajole potential donors, explaining in a million words or less what Geller and psychic research mean to her. "Gee, was that the California ring?" she puzzles, ignoring one particularly insistent phone, then wondering whether it was her special code ring from Ed Mitchell. Her days are hectic: lectures on parapsychology; then home to help out a Canadian television producer; a dash into her enormous kitchen to scrape up lunch leftovers—"Do have more, please," she pleads; then out the door to an already late luncheon date, pausing to give instructions to Hattie, the maid, and her incoming daughter; then answers a last, persistent question about her involvement in psychic research. "My grandmother once told me I should tie a broom to my tail and sweep while I zoom around," she laughs. "But I love it. When you're really turned on, it doesn't seem like work."

The Skutch apartment is a rendezvous and camping ground for out-of-towners who have been known to pitch sleeping bags on plushly carpeted floors. Thoroughly charming, intelligent, and candid, with a compulsive urge to play things straight, Judy Skutch is a formidable den mother for the New York psychic pack.

A graduate of Hood College, for a time she attended Columbia Graduate School, studying literature. Now she teaches extension courses in psychic research at NYU. "From me they get to hear what they want without having to listen to a bunch of kooks and crackpots," says Judy. "That way, they can make their own judgments." Ms. Skutch once wanted some decorative plastic panels for her kitchen. In typical fashion she ended up taking over the firm that makes the panels and now has the title of vice president. Husband Bob, her second, is a stockbroker and an officer in a couple of well-known mutual funds. Ms. Skutch plays down her obvious affluence, coyly slipping into the conversation the assertion that "I do all my own cooking," and modestly ranks her husband as "only a middle-level broker."

After following Dow Jones ticks all day, Bob Skutch returns home to pursue his real calling—faith healing. At the time of this writing he was administering help to about

sixty patients, laying on his hands, using what Ms. Skutch terms "meditative techniques" to help cure or ease a range of ailments from headache to terminal cancer, all done without charge. Judy has no explanation for how her husband accomplishes his healing, other than to suggest that "he just cares enough or perhaps it is some form of energy."

Concerned about the many "cranks and frauds" reaping profits from faith healing, Ms. Skutch and her husband hope to establish a formal "medical" panel of psychic healers to oversee the ethics of their profession, much as the American Medical Association does with doctors. The Skutches want healers to be licensed, to swear to an equivalent of the Hippocratic Oath, and to charge nothing for their services—in other words, to go straight. "We want to throw out the garbage, throw out the cheats and the frauds," declares Ms. Skutch. "But we don't want to throw out the baby with the bath water." This conventional approach to an unconventional phenomenon marks the Skutches as two of the least fuzzy-headed of all those involved with the multitude of psychic wonders. "You talk to the healers and they are as kooky as bedbugs, but they are obviously 'tuned,'" laughs Judy, displaying a quality most unusual to the psychic subcult, a sense of humor. She is one of the few involved with the paranormal who have the ability to laugh at the silliness that infects much of this far-out field.

Professing no psychic abilities herself, she says that her interest in the field stems from daughter Tammy's formidable powers. "My daughter does more interesting things than Uri does, and on a more personal level," explains Judy, who claims to engage in a perpetual barrage of telepathic *tête-à-têtes* with her teen-ager. Tammy's psychic revelations run the gamut: guessing what's for dinner; winning at Scrabble; finding lost articles, and delving into more serious precognitive dreams and mediumship. Recognizing her talents, classmates pester Tammy with requests: "Johnnie won't go out with me; get him to." "Help me get my mother to change her mind." While other fifteen-year-old girls pick up their pocket money by baby-sitting, Tammy runs psychic consultations. When she is not responding to her friends or zapping another twenty-four out of twen-

ty-five guesses on her very own electronic ESP teaching machine, the refreshingly non-spooky Tammy plays first-string basketball and has also run for eighth-grade class office. There was even talk of starring her in *The Exorcist*. Judy Skutch harbors the usual motherly concern, lest her daughter (by her first marriage) find all the attention detrimental. "It doesn't help my daughter to know she is being studied for ESP."

Judy Skutch's personal experiences have reenforced time and again her belief in altered realities, a world view far different from the commonly accepted one. For her, because of her daughter, because of her husband, because of her dead grandmother whom she believes has spoken to her through a trance medium, the paranormal is a reality. "I thoroughly and absolutely believe it," she declares. "I know it. These things we are talking about are something that happen frequently between child and parent, lovers, husbands and wives. There is no limit to what we can do if we believe that we can do it."

Such firm belief in the reality of the psychic world brought Judy Skutch together with Edgar Mitchell. She serves on the board of his Institute for Noetic Sciences in addition to running her own foundation, which essentially is a funding operation to finance some of the Uri Geller work at SRI and some research at City College and Brooklyn's Maimonides Medical Center. It was through Mitchell that the Skutches first met the Israeli in January, 1973, after he had just finished five weeks of testing at SRI. Judy Skutch says that neither she nor her husband is socially or professionally close to Geller's mentor, Andrija Puharich, but adds, "I am extremely grateful to Andrija for having the perspicacity, the guts, and, yes, the showmanship to bring Uri over." She has gotten quite close to Geller, insisting that she "never doubted his sincerity." That does not mean, however, that she does not tell him to "cut out the crap" when he starts pulling his pouty childish stunts. "I see something flying around the room [things supposedly materialized by Geller]—other people shout hosannas, I just look and hope to God it won't break something or hit anybody on the head. Sometimes when he is around he is like my fifth child. He has rages with his friends—bursts of anger, bursts of joy."

The psychic has grown famous for stomping out of rooms shouting, sudden moods that overwhelm him, mostly when someone has challenged his veracity or ability. Another Geller intimate, familiar with professional psychology, believes that such flashes of truculence stem from "a weak and ill-defined ego. Therefore, he requires lots of support." Thus, one becomes aware of the reason for Geller's almost continual lapdog eliciting of praise after he has chased down a psychic bone.

"Uri is sort of a star personality," continues the patient psychic den mother, "more interested in accolades than science or trying to understand himself. There is a tremendous amount of untamed energy in Uri. He should be working out with weights constantly—or screwing."

A large portrait of the mistress of these words, dressed in blue, left hand assertively on hip, looks out from over the fireplace of the Skutch living room. Each time I entered there I half expected the portrait to move its eyes toward the intruder—and wink in jest.

The Skutches are Geller's entry point into New York psi-ciety. Realtor John Tishman and his wife, Sue, Byron and Maria Janis (he the musician, she the daughter of Gary Cooper, and, more importantly, an accomplished faith healer), Stewart Mott, the General Motors heir, and others form the classy core of support for Judy's foundation. In addition to funding research in far-out science, the group gets to rub elbows with the handsome and entertaining Geller.

The night he appeared on "The Jack Paar Show" (bending a seven-inch steel spike that Paar held) some of the group met at Trader Vic's to celebrate the performance. Sue Tishman was skeptical, though, annoyed that her husband had become involved with Geller. "But Uri was really in top form," recalls Ms. Skutch, and he promptly bent Mrs. Tishman's dinner spoon—as well as her mind. That night was a cornucopia of psychic happenings. Geller was continually hopping up and down, phoning friends, seeking assurances that he had come off well on television. Leaving broken cutlery in their wake, the group rendezvoused at the Skutch apartment, some thirty people crowding in to witness the Israeli close up. "Uri wanted a glass of orange juice," says Judy, adding that he never drinks alcohol,

smokes, or uses drugs. Fetching the juice herself, she was walking into the breakfast room when she "heard a clink that got my attention, maybe subliminally . . . I just don't know. But in an arc, falling at my feet, landed a spoon from the hotel."

Materialization? Or hokum?

Geller just happened to be standing at the other side of the breakfast nook, his back to Ms. Skutch. Could he have lobbed it over his shoulder just as she was coming through the door? "He could have tossed it," concedes the mystified hostess. "I don't know. All I do know is that it fell slower than you'd expect something to fall." One gets the feeling that she does not really believe Geller materialized the spoon. But because he has besieged her and others with so many extraordinary happenings, she has trouble not accepting materialization as just another in the long string of superman stunts. "It makes you feel it can't all be nothing. My daughter can do it, so Uri can do it—so, big deal."

In March, 1973, the principals of Judy's Foundation for PSI met with Geller, Puharich, and SRI's Russell Targ to work out the details of a contract for researching the Israeli at the large West Coast think tank. The meeting took place in the Skutches' high-ceilinged study, one wall lined with books, the other with a huge black couch. It was an intense, emotional negotiation. "They were talking about Uri's life, his future," recalls Ms. Skutch. "You might say that the room was seething with electricity." During the lengthy discussions she had taken off a large, heavy amethyst ring and had placed it on the coffee table in front of her. Massaging her sore ring finger, Judy reimmersed herself in conversation for a matter of "minutes at the most," then casually glanced at her ring. She was shocked. The stone was shattered and the gold band squashed, as if ripped open from the inside.

"Goddam, my favorite ring!" she yelled, jumping up in anger. "Uri practically passed out in his seat with an Andy Gump stupid look on his face." Ms. Skutch insists that Geller had nothing physically to do with breaking the ring, because "he was totally involved in the conversation," looking to his left toward Puharich and Targ. Besides, she adds, everyone in the room had seen trick after trick and fully

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backed Geller's claims—"they didn't need a sign." Still, she concedes, "there's always the question whether he did indeed touch the ring."

"Now you have a museum piece," cracked Geller, thinking to charm his way past Judy's anger. But for her it was no joke.

Nevertheless, the sixty-thousand-dollar contract with SRI was signed, with Edgar Mitchell designated as the on-scene representative for the foundation, responsible for monitoring SRI's research with Geller. "The SRI data speaks for itself," asserts Ms. Skutch. "It is a really honest study under controlled conditions with as many of the variables removed as we know how. But it's only a start. ESP must stand on scientific proof. Experiential truth is not enough. The work at SRI just means it will be a try, and hopefully an honest try."

The N.I.C.E. (National Institute of Co-ordinated Experiments) was the first fruit of that constructive fusion between the state and the laboratory on which so many thoughtful people base their hopes of a better world.

—C. S. Lewis,
from *That Hideous Strength*

SRI PUTHOFF, SRI TARG

STANFORD RESEARCH INSTITUTE (SRI) LIES SOUTH OF SAN Francisco along a thirty-mile El Camino Real corridor of future-shock factories. Everything from Buck Rogers weaponry to *The Whole Earth Catalog* and "Sunshine Acid" has been conceived on this peninsula of things-to-come. Nearby is a NASA laboratory responsible for exo-biology, the "Project Cyclops" strategy to communicate with extra-terrestrial life, and robots that recently scouted Jupiter, eventually to exit the solar system carrying mankind's first "message-in-a-bottle" greetings to any would-be extragalactic civilizations. The Institute for the Future, whose Delphi panels cast scenarios for the twenty-first century, is not far away. And a network of electronic defense contractors extends off the corridor's axon, carving sand-grain brains out of silicon ingots to guide missiles and men. Huge, Ozymandian antennae raise their alabaster heads above the neon surroundings, ready to hear the slightest squeaks from satellites overhead. Just a mile and a half down Middlefield Road sits Edgar Mitchell's Institute for Noetic Sciences, three spare rooms in a modest two-story frame hut. The campus of Stanford University is close at hand. Resembling a rustic English estate, the university surrounds its quark detectors and proton guns with the Bragdon Wood of C. S. Lewis' novel, *That Hideous Strength*. Then Ravenswood.

Here, on seventy acres fronting Ravenswood Avenue in Menlo Park, is Stanford Research Institute. The modern headquarters building, with its salmon-pink brick façade headed by white colonnades and pocked with gunport-like openings, looks as if it could withstand a siege. Open-air corridors connecting buildings are secured with heavily

barred grills. To the back are separate rows of two-story wooden buildings, white paint peeling, with the drab look of retired army barracks—which they are, having served as a reception hospital for World War II wounded. Visitors sign in and out, wear identification badges, and have to be escorted to most areas of the vast complex—security for SRI's one thousand or so projects, whether classified studies of nuclear weapon death counts, estimates of world trade in the year 2000 for multinational companies, or analysis of an eighteen-minute tape gap for just one customer, Richard Nixon.

Founded in 1946 as a wholly owned subsidiary of Stanford University, SRI successfully capitalized on the postwar research and development boom, building up consulting expertise to serve both government and private industry. SRI has taken on challenges as diverse as devising computer-readable lettering—the funny numbers found on every bank check—and advising where Disneyland should be built. Institute management likes to brag about new programs in health care, environment, education, and urban affairs, but military research has long provided the backbone of SRI's existence. SRI's chemists and psychologists tested exotic compounds like LSD for their potential value in chemical warfare. Counterinsurgency experts operating out of SRI's Bangkok office helped develop electronic sensors to detect Asian guerrillas and, according to the *Washington Post*, even had one SRI researcher free-lancing as advisor to exiled Laotian General Phoumi Nosavan on his attempted takeover plans for Laos. Bioengineering scientists study seals and sea lions for the navy, hoping to utilize new methods of underwater perception. Just recently an SRI scientist successfully wired a man's brain directly into a computer, allowing the silent thoughts of this mind-machine graft to command the computer's functions. SRI cyberneticists build robots, perhaps the most sophisticated in the world, with an eye one day to drafting them into the infantry, as well as having them run Vonnegut's *Illum*. Such war-related research is necessary but disheartening to many. Long a sore point with university liberals, SRI's defense work eventually triggered student demonstrations and widescale demands to sever its lucrative military research from the university. In 1970, the Stanford trustees divorced

SRI from the university for a settlement of twenty-five million dollars plus a percentage of all future business. Except for moonlighting professors, friendly contacts, and the continuing payments, the two now have no formal connection.

The institute's record 1974 revenues of \$84.7 million produced "an excess of revenue over costs" of \$1 million—exceptional hustling for a "not for profit" organization in a recession year. Nearly three-quarters of that business continues to be government funded, thirty-eight percent of it from the military. Paul Dickson's book, *Think Tanks*, quotes one of SRI's founders, Weldon Gibson: "We're not crusaders and choose not to stand in judgment of others. The main thing we're interested in is rational problems to work with . . . we're not in business to make moral judgments." Dickson rightly accuses SRI of harboring a "mercenary mentality," a hired-gun attitude that is willing to take on any problem as long as the money is right.

The genesis of SRI's psychic research remains unclear, and the institute's top management, from President Charles Anderson on down, prefers to keep it that way. Everyone connected with the project is hesitant to spell out the details of how such a big-time think tank was willing to put its commercial reputation on the line with this historically borderline research. The decision seems especially peculiar since all involved claim that there was very little outside money available to back such a venture. Bonnar (Bart) Cox, executive director of SRI's Information Science and Engineering Division, under whose auspices the psychic research is conducted, offers one low-key explanation. Among the laser optics group of scientists that transferred into his division in 1972 was an applied physicist, thirty-six-year-old Harold Puthoff, a highly credited electrical engineer who had just joined SRI as senior research engineer after five years on the Stanford University faculty. Although his specialty is lasers, Puthoff was particularly interested in trying to verify the Backster Effect (named after Cleve Backster, the lie detector specialist who first capitalized on the idea)—the claim that plants sense the presence, even the thoughts, of humans.

Each researcher inside SRI's cut-throat publish-or-perish environment is responsible for generating his own funding; otherwise, a project seldom is started. Accord-

ing to both Cox and Puthoff, there was funding available to study the Backster Effect. George W. (Bill) Church, Jr., a San Antonio fried chicken franchiser ("the Colonel Sanders of the Southwest"), was willing to sponsor this original Puthoff work, using money from his private Science Unlimited Research Foundation (SURF). Explains Cox: "Hal approached me with some measurements that he wanted to be made and the fact that he could be paid for them. They seemed not unrealistic things to be looked at, so we asked for clearance to do this and we were given it, and there we were launched." Special permission from President Anderson was sought and granted, a procedure seldom taken unless the nature of the new work is considered out of the ordinary. (SRI's study for the Nixon White House of the Watergate tape gap required similar top-level approval.) Through the unusually efficient grapevine of psi aficionados, Puthoff made contact with New York psychic Ingo Swann, and he brought him out to the Ravenswood complex in the summer of 1972 to assist in those first Backster Effect experiments. SRI's psychic research program blossomed from this modest beginning, leaving plants behind in favor of humans. (Three years later, however, psychic experimentation with plants was still continuing at SRI, conducted by a graduate student from Sonoma State University.)

That is SRI's public explanation. Generally, the less complicated an explanation, the more likely it is true—a sort of Occam's Razor applied to social systems instead of physical systems. But the puzzle remains. It was completely out of character for SRI management to go off in entirely new directions with no more funding than they acknowledge, a puzzle compounded by the nature of the new venture. The far-out, if not outright kooky, stigma attached to psychic research—whether justified or not—leaves SRI extremely vulnerable to criticism and possible contract cancellation by some of its more conservative customers. Why, then, was SRI willing to stake its reputation on such a venture? It would be done only if the risk were hedged against a pledge of further large-scale support. If so, who promised the support?

Soon after Hal Puthoff began the initial run of experiments with Ingo Swann, SRI hired another full-time pro-

fessional, physicist Russell Targ, who had been a long-time extracurricular investigator of psychic phenomena while pursuing laser research at the nearby Sylvania laboratories. Puthoff knew of Targ's intense interest through their acquaintanceship in an informal parapsychological investigations group that Targ helped initiate some years back. Bart Cox, the man who hired both men, tries to recall his reasoning at the time: "Essentially, Russ came here with Hal, saying that 'we believe we can get funding to do more work. We have a little bit, we can get more from Church, and we can get more from other places.'"

Upon being hired, Targ set off on a countrywide swing, hoping to garner more interest and funding from government agencies. Specifically, where did the Puthoff/Targ team try to find sponsorship? "Anywhere," responds Cox. "Any agency. I would imagine they have been in touch with, gee, I'd say ten to fifteen agencies of the government over a period of time."

Cox, and all others in the SRI hierarchy, responds evasively when questioned which specific agencies of the government showed initial interest in the psychic research. President Anderson sets the tone for this vagueness. "I really don't remember" and "I don't recall" are his most frequent answers to questions about the genesis of SRI's psychic research. Anderson does say that when his vice president for research, Donald Scheuch, and Bart Cox came to him and requested permission to take up the psychic investigations, all he sought was assurance "that the work was to be done in a thoroughly responsible fashion and that it would be devoid of sensationalism." His orders to subordinates: "Do it on the basis that we undertake other kinds of work—simply try to ascertain the facts and study the phenomena in as careful and deliberate fashion as you can." Anderson steadfastly maintains that he "cannot recall" whether in-house, SRI funds, or outside monies were used to begin the project. (The best estimate is that more than half of all the SRI psychic research to date has been supported by SRI's own funds, accounted for by writing off Puthoff's and Targ's personal overhead onto their laser consulting work.)

Unconsciously echoing Norbert Wiener's dictum on "heretical experimentation," Anderson emphasizes the point

that "we certainly should not shy away from doing things simply and solely because they might be controversial. We don't deserve the reputation of being a first-class scientific professional organization if we did that." Certainly not. If there is criticism due SRI, it should be directed at the shuttered secrecy surrounding the work, not the fact that the institute is conducting such long-overdue research.

As laser scientists, both Hal Puthoff and Russ Targ have excellent credentials. Puthoff, a quiet, baby-faced, baggy-eyed native of Chicago (born June 20, 1936), won honors at the University of Florida, where he was deemed "outstanding sophomore" and "outstanding engineering student." He earned his bachelor's (1958) and masters (1960) degrees there in electrical engineering, then reported to active duty as a navy officer at the highly secret National Security Agency (NSA) in Fort Meade, Maryland, headquarters for this country's code breaking and collection of communications intelligence. If anything, these super-spooks are even more secretive than their cousins at the Central Intelligence Agency (CIA). NSA probably has the best and biggest installation of computers in the world, used to attempt to crack the codes of foreign governments. Puthoff's responsibility while at NSA was to research and monitor "Project Lightning" contracts, an attempt to develop ultra-fast computer processors. He initiated research into the potential use of lasers, fiber optics, and other exotic electrooptical technology as possible solutions to the need for massive speed-of-light computers, and for this work the Department of Defense awarded Puthoff a "Certificate of Commendation for Outstanding Performance." Clearly, the young researcher was no slouch.

After three years' active navy duty, Puthoff remained at NSA as a civilian for another eight months until entering Stanford University's graduate program in physics in September, 1963. There he continued his specialty in laser research, conceiving and patenting a high-powered, tunable, infrared laser. After obtaining his doctorate in 1967 in physics and electrical engineering, Puthoff joined the Stanford staff as research associate at the Microwave Laboratory and lecturer in the engineering department. Two years later he and a Stanford associate co-authored a widely used college text entitled *Fundamentals of Quantum Electronics*,

adding to his impressive list of technical publications. The introduction to his book almost could be used to introduce Puthoff's present work, and it serves as an ironic presage to his later thinking about psychic phenomena: "Introductory courses in quantum mechanics generally begin with a review of the progressive failure of classical physics to account for the outcome of certain physical experiments. This failure is then traced to the wave-particle duality and the inherent property of discreteness found in nature, concepts not fully developed in the classical view. To account more fully for these concepts, the fundamental postulates on which physics is to be based must be reformulated." Puthoff maintains that psi phenomena dictate a similar urgency for reformulation of classical physics.

"I sort of came in [to psychic research] by a funny route," explains Puthoff. Late in the 1960s, the general recession in funding for basic scientific research hit Puthoff along with most other scientists, "so I was looking around for new areas to do research in." About the same time, the technical journals were discussing hypothetical, faster-than-light tacyon particles, postulated by quantum mechanics but not yet found. "As I read over those properties [of the tacyon], it appeared to me that some of their properties [like moving backward and forward in time throughout the entire universe] were similar to the kinds of things that were reported for the psychic function." That stirred Puthoff's physicist's curiosity to investigate further. His appointment to SRI in 1972 was to work full-time in psychic investigations—as long as he could find the money to support such work. If not, his laser expertise was and still is utilized for projects in another SRI division; the same for co-worker Russell Targ.

In contrast to the slicked-down, compact calmness of Hal Puthoff, Russ Targ comes on tall, gangly, and intellectually impatient. The bristly hair atop his six-foot five-inch frame seems to stand on end at the slightest challenge to his point of view. Targ displays an intense suspicion of journalists, a trait shared by his equally press-hostile brother-in-law, world chess champion Bobby Fischer. However, if a stranger eventually gains Targ's confidence—which seems rare—he can be quite gracious.

Almost coincident with his appointment to SRI in the

summer of 1972, Targ flew to Iceland to kibitz the Fischer-Spassky championship chess match, and he spent much of his time there investigating not chess, but a local faith healer. During the matches the Russians complained of evil influences hexing their man, even going so far as to spread the rumor that Bobby's special chair was bugged to relay secret instructions from a clandestine team of advisors. Perhaps they were just responding to the psi field put out by Targ, who, along with his daughter, exhibits considerable paranormal abilities.

Also born in Chicago (April 11, 1934), Targ's academic credentials are less impressive than Puthoff's, with only a bachelor's degree in physics from Queens College in New York and two years of graduate work in physics at Columbia. But the lack of formal graduate training has not limited his scientific creativity, since he, too, has turned out numerous technical papers—mostly on lasers—and is credited with inventing a sophisticated, tunable plasma oscillator at microwave frequencies. More recently, while at Sylvania, Targ researched and developed a range of high-powered gas lasers. Such lasers are in the technological forefront of controlled fusion applications, as well as having more lethal military potential.

Targ, whose interest in parapsychology dates back some twenty years, helped found in 1965 the Palo Alto-based Parapsychology Research Group, Inc., an assemblage of scientists and interested laymen that quietly has conducted informal inquiries into paranormal behavior. Before coming to SRI, Targ built an electronic "ESP Teaching Machine" that he used to conduct a range of spare-time experiments, including studies of his young daughter's ESP abilities. The National Aeronautics and Space Administration later contracted with SRI and Targ for a year-long series of experiments using this machine.

Shortly after the two fledgling psychic researchers arrived at SRI, they encountered Andrija Puharich at a parapsychological and healing conference at Stanford University. He told them about his plan to bring Uri Geller over from Europe for scientific studies at Kent State University. Targ, who has known Puharich for several years, immediately spoke up: "Great! Can we work with him?"

Geller flew over from Germany in early November,

1972, spent two days with Puharich in Ossining, then headed west to the laboratories of SRI. Geller recalls his feelings: "I had a big discussion with Andrija and I told him, 'Andrija, I don't think I can do anything there [SRI]. I don't know if I can work with cameras shooting me all the time, and I don't know if I'll succeed.' Andrija was really depressed," continues Geller. "He was on the hook. He had been talking about me to these guys, writing them letters that I disappear things, things bend—they really thought he was crazy. Not only that; Andrija had lost many friends because of these stories. So I had to somehow get him off the hook. And I didn't know how. I didn't know I could do anything." That first evening in California, in an initial meeting with the SRI researchers, Geller made known his fears. "I don't think I should be here. I'm going back on the next plane," he announced.

"Why?" countered the SRI team, nervous about losing their prime subject.

"Because 'They' won't let me."

"Who are 'They'?"

"The Spectra flying saucers."

This was the first time that Puthoff or Targ had an inkling about Uri's extraterrestrial contacts, the alleged source of his "powers." Puthoff continues: "So then we say, 'Why won't 'They' let you do it?', because we just want to get off his considerations about not staying."

"We've been working with psychic people for a long time," says Targ, "and they believe all sorts of things. Each person claiming psychic ability has a different explanation of how he got it. I'm happy for him to believe whatever he wants to believe. Pat Price believes certain things; Ingo Swann believes certain things; Gerard Croiset believes certain things; Peter Hurkos believes things, and Eileen Garrett believes things—each of these people has a different explanation for how they got where they are. In my experience, all of them have some paranormal perceptual ability, but they by no means have a coherent explanation for what they are doing. I mean, Croiset and Eileen Garrett, for example, are at opposite ends of the universe regarding how they explain their abilities. Eileen Garrett has 'spirit guides' and Croiset thinks it's due to his God-given gifts. He says that, just like a genius is well beyond what is termed

'normal achievements,' he's been given a gift of psychic ability, and no matter what an ordinary person does, you can never be as good as Croiset, in all humility. It's all him. He doesn't have any truck with UFO's or spirit guides or anything."

Targ believes that since the Spectra story is "an experiential account," and no evidence is provided to back it up, it is impossible to disprove, or even assess. "If Geller or anyone says, 'I come from a flying saucer, and to prove it I'll read your mind,' and then he reads your mind, what he's proven is that he has some kind of paranormal perceptual ability. It doesn't prove all impossible things."

Bart Cox, Puthoff's and Targ's boss, is more succinct, naively asserting: "Geller's extraterrestrial hypothesis didn't bother us at all." It was what the Israeli could show in the laboratory that counted, according to Cox. And an important tool to the researchers was giving Geller—and any other psychic working for them—as much moral support and ego gratification as possible without jeopardizing the integrity of the experiments. This is a point often attacked by Puthoff's and Targ's detractors, who argue that uncritical acceptance of Geller's outlandish stories and psychic tricks in the informal settings leads to sloppy acceptance of experimental data during formal laboratory testing.

Geller immediately took advantage of the SRI team's relaxed, supportive approach toward him. "I always imagined a laboratory was a place where they grab you, strap you down, and say, do it, do it, do it. Hal and Russ were so nice. They said, 'If you can't, don't do it,' and then I had my confidence. That first night I did about fifteen things that I don't know how I did, but I did it—things broken, drawings, everything. They all flipped out, all of them."

But Targ insists that he and his colleague are far more tough-minded than to "flip out" after a few informal demonstrations. "Geller can do his whole mental act around our table in the SRI International Dining Room and be mystifying and charming and fantastic, and we don't consider that an experiment. We consider that lunch." But does it affect their mental set, their bias toward Geller? "In no way," responds Targ, offended at such a suggestion. "If anything, it makes us more suspicious, because it's so

clear that the stuff he does at lunch, for example, any magician could do. It reminds us again that he might be a clever magician."

Those first few weeks of testing Geller were tense. Daily he threatened to pack up and leave if Puthoff and Targ did not provide the superstar treatment that he felt he deserved. All the while the SRI researchers attempted to test Geller with a variety of psychic measurements, getting him to operate what he "felt best at."

At night, the handsome psychic was a popular attraction on the social circuit. With dark eyes flashing and shirt unbuttoned to his navel—"some women think I must have special sexual powers, but this is not true"—Uri charmed many a Palo Alto hostess, strewing a trail of bent and broken wedding silver in his wake.

But there were exceptions. "I never want Uri Geller in my house again," moans one wife of an SRI official, disgruntled at having several pieces of her expensive cutlery sacrificed to Geller's prowess. Sunning himself by his motel swimming pool one day, the psychic encountered Harvard physicist and science establishmentarian Nicholas Bloembergen and, predictably, bent the scholar's room key. Informally, at least, Geller was a sensation along El Camino Real.

The thesis behind all of SRI's experiments in psi phenomena is measurement: hard measurements where dials swing, pointers point, computers click, lights flash, and bells ring—that is the experimental goal of Puthoff and Targ. Their training is in the so-called "hard" sciences, where measurement of physical effects is the key to theorizing. In the land of the physicist, the one-shot measurement is king. Their credo: if it moves, measure it. And if you can, it's real. For centuries, Indian yogis claimed they achieved altered states of consciousness by their meditative techniques. And for years Western science dismissed such claims, until such time that highly sensitive microelectronics made it possible to measure a commensurate change in a yogi's brain state. Western science demands demonstrable, not experiential, proof. Biofeedback techniques opened the door to such proofs. Once that needle swung and centered on an eleven-cycle-per-second alpha brain rhythm—in re-

sponse to a yogi's willing it—Western science took note of what hitherto had been dismissed as nonrational fuzzy-headedness—because it was measurable. Therefore, Puthoff's and Targ's primary goal was to put a yardstick to the realm of the psyche.

Uri Geller's first days at SRI were spent trying a wide variety of experiments. One of the key points the SRI team insists upon in their testing is that the subject be given a chance to work his paranormal powers on whatever task he feels comfortable with, not an imposed series of tests, so Puthoff and Targ had a smorgasbord of about ten experiments set up and waiting for Geller's arrival. "I chose the most fun, the craziest," laughs the psychic.

The room where most of the SRI experiments take place resembles a Medicare doctor's waiting room. There is the same obvious attempt to make the "patient" feel comfortable. A colored photograph of a stand of Robert Frostian trees decorates one wall; a cheap wood statue of a bearded figure—perhaps Christ—stands on the end table. A long imitation leather couch sits beneath a row of windows whose blinds stay closed. But the muted tan walls and living room furniture cannot conceal the technological smell of the experiment area. In the center of the room, a microphone hangs down from the ceiling, and one or more movie cameras or sometimes a video eye oversee the scene. An ESP teaching machine sits ready for use on a typing table. The room is connected to a small anteroom cluttered with more test equipment. The hall outside is just a step away from the offices of Puthoff and Targ, located at the end wing of SRI's first-floor engineering building. In order to get to the psychic research area, one passes through racks of electronic equipment and workbenches filled with a spaghetti of wires, connectors, and clips. Just as a doctor's office retains that peculiar antiseptic odor, the SRI psychic area smells of burning solder and heated cathodes.

Following is a summary of the principal psychic tests the SRI team tried with Geller in its attempt to verify, measure, and analyze his powers. Uri's ability to affect matter, either by bending or breaking objects, or altering magnetic fields, was the highest priority on the experimenters' checklist. Puthoff and Targ devised many original tests to search for these psychokinetic powers, tests unique

in the history of parapsychological research. They also tested the range of Geller's clairvoyant and telepathic abilities in a variety of shielded settings. Many of these tests have never been reported publicly.

The most important factor in analyzing the merits of any experiment, especially a psychic experiment, is to determine precisely how the endeavor was carried out; in formal terms, the test protocol. Because of the ever-present suspicion of fraud or self-delusion that swirls around any paranormal experiment, each psychic test should be spelled out in far greater detail than what might be considered necessary for more "normal" scientific reporting. For never did Caesar's wife have to be more above suspicion. Ideally, reports of psychic phenomena should be accompanied by a videotape playback of the experiment to provide an entire re-creation of the test protocol, rather than just a written condensation of the results. In order that paranormal research be accepted, it may be necessary to expand the rules of scientific reporting to include such information as: Who else was present during the trials? What conversations were held? Was the subject searched? Was the experiment room checked for electronic bugs? Even subjective items like the experimenter's personality, feelings, and emotions at the time of the experiment should be taken into consideration. In psychologist Charles Tart's words, it will be necessary to adopt an entirely new set of rules to investigate "state-specific sciences" like the paranormal, since they attempt to define experiential states of mind, not merely the objective behavior of matter. Such experiential states of mind link observer with observed—both are part of the experiment. Thus, it is necessary to focus in detail on the environment at SRI during the tests with Geller and others, as well as to report their results. Here, then, is an after-the-fact psychic *écorché*.

Magnetometer Test

A magnetometer is a small electronic device that measures fluctuations in a magnetic field. Apollo astronauts carried magnetometers to the moon, both hand-held and mounted aboard the command module, to map the

minuscule lunar magnetic field. The portable magnetometer used in the SRI experiments has a silver-colored probe connected by electrical cord to the body of the device, all of which rested on a small table. A continuous strip chart readout—on which a sensitive pen inks the measured changes in magnetic fields—was capable of measuring a total change of magnetic force equivalent to that of the earth's average field (three-tenths Gauss).

Before Geller was brought into the experiment room, Puthoff and Targ tried to jar the magnetometer by jumping on the floor and kicking the table that held it, even passing their hands *à la* Geller over and around the probe. Puthoff maintains that the magnetometer could not be made to react to any attempted spoofing, that "as far as the signals were concerned, we couldn't find any artificial way of producing them." The researchers passed a large magnet around the probe and discharged static electricity near it. In both instances, the pen wiggled as expected, drawing an oscillatory, wavy pattern in response to the artificial deflections, a pattern that gradually died out. The instrument then was left to run unattended for as long as a day, producing a continuous straight-line readout indicative of no random disturbances.

Geller was searched with the magnetometer to check for magnets or metal pieces concealed in his hands or on his person. SRI reports finding nothing suspicious. Then the psychic would try to concentrate his powers, clinching first his left, then his right, fist above the silver probe, as if to squeeze magnetic forces out of his hands. Sometimes he would pass an open palm over the probe. On some occasions, after long effort, the instrument's recorder jumped in rapid single pulse, nearly full-scale deflections, indicating a one-sided change in the magnetic field. There were no oscillations like those created by the artificial stimuli prior to the test. Sometimes, say the SRI researchers, substantial fluctuations in the magnetometer reading occurred when Geller was not even moving his hands around the probe, merely when he was in the magnetometer's presence.

The SRI team hesitates to draw any definitive conclusions about Geller's work with the magnetometer, since they have no absolute assurance that he did not somehow manage to fool the instrument and their test protocol. If he

indeed did manage to affect the magnetic field surrounding the instrument, or perhaps affect the internal workings of the instrument itself, science as we know it would be hard-pressed for an explanation.

Pan Balance Test

In this test Geller was supposed to affect a one-gram weight balanced on an electrical scale. The small metal weight was placed under an aluminum can on the scale, then the entire apparatus covered by a glass bell jar to protect it from stray air currents. The experimental setup was tested to see if it could be spoofed by slight taps on the bell jar, the table on which it sat, or by jumping on the floor. Static electricity and a magnet also were used to test the apparatus. All these artificial vibrations and effects again caused the strip recorder to indicate the predicted wavy signal, which again gradually died out. The experimenters maintain that such false signals are easily recognized by this well-defined pattern.

Geller was brought to the scale. Like some Greek who had lost his worry beads, he began wringing his hands over the bell jar. At first the recording pen showed small but rapid changes in the scale reading, indicating fifty-milligram deflections. Later, Geller caused the balance to weigh heavier by eight-tenths of a gram, then weigh less by one and one-half grams. Each signal lasted only two hundred milliseconds (two hundred thousandths of a second) and, like the magnetometer readings, were sharp, single spikes completely unlike those signals achieved artificially. The SRI experimenters shy away from drawing official conclusions about this experiment. But in private, they use the word "levitate" to describe the effects. If Geller did indeed levitate an object, however small, all of known science would be overturned.

Ingo Swann, one of the other gifted psychics studied at SRI, whose intelligent and conscientious approach qualifies him as one of the best-informed critics of psi experiments and methodology, scoffs when told that the SRI team believes in the magnetometer and pan balance results. Swann overlapped with Geller at SRI and was quite familiar with

the routine, having tried some of the experiments himself. "Sure, the rug in that experiment room absorbs the vibration if you jump up and down. But that floor is connected to the office next door. Every time the secretary slams her desk drawer shut you'll get a signal on the instruments. That floor doesn't have a rug on it. Ha!" It's possible that Swann is right. Or it is possible that he is jealous of his title as PK (psychokinetic) champion of the Western world, having won the title in the CCNY laboratory of Dr. Gertrude Schmeidler, psychically raising and lowering the temperature of a liquid-nitrogen-filled thermos bottle in his now classic experiment. At any rate, Geller's "levitation" achievement remains in doubt.

Metal-bending

The SRI researchers eagerly anticipated testing Geller's most famous stunt, metal-bending. A whole set of rings and bars of various metals (brass, copper, steel, aluminum) carefully had been machined, weighed precisely, and etched with identification numbers. Special spoons also were made available to Geller. This precious trove was kept in a sealed wooden box inside a combination-locked suitcase, all inside a top-secret security safe and brought out only when Geller was to attempt to bend one of the objects. Witnesses had to sign for the suitcase each time it was checked in and out. "It was really like handling a million dollars!" exclaims Geller. "The suitcase never left Hal Puthoff's hands. Whenever he had to leave, he'd check it back into the safe. Nobody could get to it but him."

During the metal experiments, the psychic would be left alone in the experiment room with an object. Cameras zeroed in on his hands from overhead and even from underneath, by means of a mirror and a transparent, plastic shelf on which the object rested. Geller would strain for hours, clenching his fist above a spoon or a ring, focusing his concentration, trying to make it bend. But nothing. "There were always little things, but the big things would never succeed, like bending a ring—I couldn't bend a ring," confesses the frustrated Geller, "because it always bent when something happened—like four cameras sud-

denly ran out. Eli [a lab assistant] was changing videotape in the next room and the ring bent. We all saw it bend." But not under controlled conditions.

Geller's only successes in bending objects occurred when SRI test procedures were eased, allowing him to touch the objects and work with them over a period of time. Under these circumstances rings and spoons did indeed get bent. Targ, commenting on the wide-ranging rumors about the experimental episodes, says, "The one thing that everybody knows about Geller's work at SRI is that he is supposed to have bent metal here. Although it's true he's bent numerous spoons over the lunch table, he hasn't demonstrated that ability in an unambiguous way, as far as we're concerned."

Yet a thirty-two-minute film that SRI edited from more than thirty thousand feet of Geller footage shot during his experiments does show several bent rings and spoons among other more successful experiments. The narrator misleadingly comments: "The copper ring at the left and the brass ring at the right were manufactured at SRI and measured to require one hundred fifty pounds of force to bend them. These rings were in Geller's hand at the time they were bent."

Earle Jones, director of the SRI laboratory where Puthoff and Targ researched Geller and who worked closely with the team, admits that the inclusion of the bent objects in the film was a mistake, conceding that "the audio says none of this was done under any kind of controlled conditions, and no conclusions can be drawn. Yet, because of the visual impact, I think you forget the words and you go away with bent spoons on your mind." The viewers of SRI's much-touted film are left with the erroneous impression that Geller did indeed psychically bend innumerable objects at SRI.

Compass

Another experiment involved a small hand compass that Geller was to affect by his usual wringing of hands. According to Geller, "The first time wasn't good because my hands were not open exactly, so the camera could say, maybe, maybe. . . . So we had to do it again. This time I

opened my hands under the camera, I turned them around, and I started working. Then when the compass moved, I had to slowly open my hands again, showing that there is nothing in my hands." The compass needle deflected about forty-five degrees, moving very slowly, as if following a tiny lodestone.

The SRI team threw out this experiment even though they carefully had searched Geller with a magnetometer prior to the test, hunting for hidden magnets. "However, according to our protocol," says Bart Cox, "if we could in any way debunk the experiment and produce the effects by any other means, then that experiment was considered null and void even if there were no indications that anything untoward happened. In this case, we found later that these types of deflections could be produced by a small piece of metal, so small, in fact, that it could not be detected by the magnetometer. Therefore, even though we have no evidence of this, we still considered the experiment inconclusive and an unsatisfactory type of experiment all together." Did anyone ever check to see whether Geller carries any metal bits inside his forearms, left over from his war wounds? No.

Thus, of all the alleged psychokinetic effects Geller came to SRI claiming he could do, the experimenters could not substantiate any except the magnetometer and the pan balance, and those they concede might have been accomplished by means other than paranormal ones. One point they do not treat is: If the compass needle could be affected by a small piece of metal, undetectable by a close check, why not the magnetometer itself? Or the pan balance? Yet the SRI team reports tentatively positive results for those experiments.

Ten-can Roulette

To test Geller's paraceptual abilities, Puthoff and Targ devised a variation of the old hidden bean trick. According to the SRI description, a professional staff member not associated with the project enters the experiment room alone and hides a small object inside one of ten aluminum

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film cans. The experiment team enters with Geller from a secluded room to the right without ever seeing the person who set up the experimental cans. (This procedure, of course, does not rule out possible collusion in advance of the setting up.) Geller then seats himself on the couch, leans forward over the coffee table holding the ten cans, and begins passing his open left hand over each can, skimming them, supposedly never touching the cans or the table, pausing over each can, "feeling" with his palm for "emanations" from the target can. One by one Geller calls out the number of an empty can. Puthoff then takes out the can, unscrews the top, and turns it upside down in clear view of the recording camera.

Seven cans are identified as empty and taken out. Three remain. Carefully, Geller points to the can in the left-hand corner and writes down its number. Out it comes—empty. Two left. Again, a careful check of each can. He thinks he knows which one hides the target, writes down its number, shows it to the camera, then touches the can he thinks contains the object. Puthoff reaches in, unscrews the cap, and pours out the object into the top. Geller goes wild with joy. "I felt it, you know, I felt the power hitting me!" If he had touched a can, or the table, explain the experimenters, the entire experiment would have been logged as a "miss."

In a repeat of this hidden-bean style experiment, one can was filled with room-temperature water by a SRI scientist not associated with the psychic research team, and then another SRI staffer came into the room and rotated the box in which the cans were placed. Again Geller searches for the filled can, using his hand "dousing" technique. After eliminating several cans, he double-checks, then writes down "No. 5," reaches in and plucks the number-five can out of the remaining group. Beaming, Geller unscrews the lid of number-five can and waters a nearby plant with its contents.

The ten-can roulette experiment was run only once per day. Five times the target was a small permanent magnet, attached to the lid of the can. A ball bearing was used five other times. Geller had a string of fourteen correct guesses on these targets, or odds of about a trillion to one against chance. In two instances, the psychic declined to make a choice (called a "pass"): the first time, when the

target was a ball bearing wrapped in paper; the second time, when the target was a cube of sugar. His passing did not score against him as a "miss." The experimenters report that, as Geller warmed to the test in the later stages, they were able to place the cans in a straight line along a black-board sill and Geller could enter the room, merely look at the lined-up cans, and identify the target can. Reports Cox: "We have no hypothesis at this point as to whether this is a heightened sensitivity of some normal sense or whether it is some paranormal sense."

Geller has his own hypothesis: "It's like there is a sort of pressure, like a strong stream of water coming out in a pool, and you put your hand to it, and you feel this invisible pressure." This "invisible pressure" felt differently for the magnet and water, and it was gone entirely when the targets were the sugar cube and paper-wrapped bearing, he says. Puharich speculates that Geller may sense the magnetic moments of the protons making up the target material, mimicking the ultra-sophisticated perception of nuclear magnetic resonance laboratory techniques.

Dice in the Box

An ordinary three-by-five-inch metal file-card box is used to conceal one large red die with white markings (both objects provided by SRI). A number of different dice were used, each one etched with an identifying serial number to guard against surreptitious switching. At times the experimenters also used a transparent die to ensure that Geller did not substitute one with a miniature radio inside that could signal which number faced up—because that was the test, to call the roll of the die after it was shaken inside the closed box. A die is placed inside the box by one of the experimenters, then shaken vigorously. Hal Puthoff generally shook the die. After the box is set down, Geller puzzles a few seconds, then draws the exact number of circular spots he thinks are showing up and holds up his answer to the video camera. Only then is the box opened, always by someone else. The reason Geller was required to draw circular spots rather than simply a number was to

eliminate possible ambiguity and argument over what the written number actually was.

Geller also was searched prior to each test, says Puthoff, to see if he perhaps concealed a magician's thumb writer, a tiny flesh-colored piece of plastic that holds a miniscule length of pencil lead underneath the thumb nail. Normally it is quite hard to spot. With practice, the thumb writer can be used to draw numbers or letters on paper at great speed and without being detected. The experimenters also sought to guard against Geller's possible use of a thumb writer by ensuring that he turn in his answer before the metal box was opened. That way, even if he did have a thumb writer, it would have been useless to him. Puthoff and Targ also feel confident that close scrutiny and peering cameras guarantee that Geller never was able to sneak a peek inside the box. In addition, the metal box had a pressure lid that had to be audibly popped up and down. That, too, would have been detected, say the experimenters, who swear that the box was never opened prior to Geller's guess.

According to Russell Targ, Geller sometimes placed his hands on the box "in a dousing fashion," but he never picked it up during this reported set of dice experiments. The SRI researcher maintains that the few times Geller did touch the box, he passed. The experimenters also insist that a magician who examined the videotape of these performances found "no way" in which Geller could have cheated. However, the fact that he did have some control over the box and die during these demonstrations does leave room for ambiguity in assessing the results.

On some tests conducted in his motel room, Geller shook the dice himself. Questioned as to whether this might be a breach in test protocol since he might have been able to control the roll of the dice, Puthoff replies that Geller shook the box vigorously enough to ensure an honest shake. "It's very clear," adds Targ. "He's like a kid in that he had something that made a lot of noise and he just shook and shook it. I probably terminated it by saying, 'That's enough.'" Why was he allowed to shake the dice part of the time? "We just wanted to see what it was he would do. In this particular experiment, he felt he could see the dice inside the box," says Puthoff.

Results? Puthoff and Targ say that prior to beginning this run of tests, they optimistically had decided to stop once the result showed odds of better than one in a million. They maintain that they were not learning anything by extending the run past that point; therefore, the die was rolled only ten times. Geller correctly named the number eight times, and he passed twice without guessing. (Passing counted neither for him nor against him in SRI's tabulation of the statistics.) The eight correct hits give odds of 1.7 million-to-one against chance, report the experimenters.

"We only talk about the more conservative miracles," muses Targ. "We have another tape of Geller that's not reported because it's more outlandish. We have a very good-quality videotape in which Geller, on another visit, said, 'I don't want to repeat that. I have a new way of doing that dice experiment.' The new way is to write down on a piece of paper a number on the table. Then I [Targ] take the box and shake it vigorously. Then he takes my shaken box and he shakes it vigorously, dumps the dice out on the table, and it comes up the number he wrote down. We did that five times in a row."

According to Puthoff, the dice was thrown "way up in the air, landing on the table, bouncing all over, and then coming up the [guessed] number." The die belonged to SRI.

"We think it's precognition," says Targ. "We think maybe even on his original experiment it wasn't that he knew what was facing up, but that he had precognition as to what he would see when he opened the box."

About six months after the initial series of dice experiments, Harold Puthoff, Russell Targ, and Earle Jones were in New York. One morning with a little time to kill, they headed to Lou Tannen's famous magic store high above Broadway. Tannen's place is the haunt of old pros whose shaky hands now betray their sleights, a hangout for those still in lights, and a continuing act for all. Showroom walls are stacked floor to ceiling with the paraphernalia of the professional magus. The crowded room is Plato's cave come to life, filled with dancing shadow players, all pawning illusions. Teen-age prodigies show off before admiring comrades. A Columbia Medical School student—with ex-

ams the next morning—comes to relax and lingers to pick up a couple of new mystifiers. Tannen's is the cheapest and most entertaining sideshow in Manhattan. But the SRI trio is there on business.

Puthoff challenged Tony Spina, one of the magic shop owners: "What do you have in the way of a dice-in-the-box trick? We'll buy anything we can't figure out." Spina rose to the occasion and proceeded to drag down stacks of intricate dice tricks. The first was a doughnut-shaped box with smooth stainless steel sides and two dice inside with rounded corners that can be controlled to flop exactly one hundred eighty degrees when the box is closed and flipped over, thus enabling a prediction of which sides will face up.

Mystery solved, the trio called for another trick, and Spina offered a small round pillbox container and one die that is placed inside, and the lid closed. The magician only can tell which *pair* of faces is up and down: for example, the "6" and the "1" or the "4" and the "3," the faces opposite each other, on the top and the bottom. Explains Jones: "That was a nice trick. It turned out the die in that one was not a cube. If it was one inch on one side, it was maybe a thirty-second of an inch smaller on one pair of faces and a thirty-second of an inch bigger on the other pair. When the lid of the box closed, it actually closed right down to the top of the die, so the amount of overlap on the lid would tell you which pair of faces was up. So we told him we knew how that one worked."

Jones, in his twangy Southern accent, begins to get worked up as the story progresses, heightening the timbre of his voice. "The next one was what I really liked; it was great. It was tremendous. It was another very small box, just a little cube. The box was small enough so that the die couldn't rotate in the box. Again Tony says, 'Okay, put the dice in the box with some face up and then close the lid and hand it to me.' So I went over and I put the dice in the box with the '4' sticking up and closed the lid and handed it to him. We shook it next to his ear. And he said, 'Yes, I know what it is . . . it sounds like . . .,' and then he shook it up next to my ear, and he said, 'It sounds like a "4" to me. What does it sound like to you?' I thought that was pretty good—except what he does is peek in the box when it's next to your ear, for it's sure that you can't see

it then." The SRI team figured out that one, too. Spina kept rolling out the dice tricks—including the fancy, two-hundred-dollar-radio-controlled ones—and the experimenters kept knocking them down.

"No, Tony, the trick we saw was with *our* dice," repeated Jones. "We went to Woolworth's and got dice and we went and got a file-card box and we put the die inside and we shook it and we put it on the floor. This fellow would write a number on a piece of paper, and then we'd open it and check it."

Spina's astonished response: "That guy would have to be psychic to do that."

They sought it with thimbles, they sought it with care;
They pursued it with forks and hope;
They threatened its life with a railway-share;
They charmed it with smiles and soap.

—Lewis Carroll,
from "The Hunting of the Snark"

A FIRECRACKER, GRAPES, AND THE DEVIL

URI GELLER'S MOST IMPRESSIVE RUN OF SUCCESSES WHILE at SRI involved a series of thirteen drawings, several of which he was judged to have sensed telepathically. This series of tests took place on a return engagement at the SRI lab in August, 1973, eight months after he had completed his initial run of experiments. On the first of eight consecutive days of drawing tests, Geller was led in back of the modern headquarters building through a parking lot to a drab, single-story, ex-hospital barracks that now houses SRI's quarters for electroencephalograph (EEG) research. The double-walled, windowless experiment room is shielded from outside sounds and stray electromagnetic radiation to prevent their interference with sensitive EEG probing of brain waves, and it contains two twin beds used for a study of the effects of sonic booms on sleep. At the foot of the beds is a leather easy chair in which Geller is asked to sit. Puthoff leaves him there with a black felt-tipped pen and a blank pad of eight-by-ten-inch unlined paper. The experimenter locks both the inner and outer doors of the metal-lined room, sealing Geller inside. Outside, Puthoff is alone. He slips a file card between the pages of a copy of *Webster's Collegiate Dictionary* and thumbs down the page until he spots the first word that can "reasonably be drawn." "Fuse" is the word he chooses. He carefully draws a large, upright, lit firecracker. "I drew in silence, by myself." (See illustrations beginning on page 112.)

Once the target is drawn and taped to the wall outside Geller's enclosure (about twelve feet from him), the psychic is told via intercom to begin concentrating. This same intercom continuously monitors Geller's every word by

tape recording. In order to talk to Geller from the outside, an intercom button must be held down. According to the researchers, he is never told who selects the target image or how it is selected.

Geller responds right away, sketching two pictures. "I see a cylinder with a noise coming out of it." His first piece of paper has three objects on it: what looks to be a snare drum with sticks; an unknown figure that slightly resembles the firecracker drawing, and the neck and head of a giraffe. His second sheet has the snare drum as the largest object, with several other smaller articles scattered around it, including a pen, labeled "pen" and underlined, a giraffe (spelled "jirraff"), another drum, and a circular maze labeled "snake." Geller also printed "drums" and "noise" on this second effort.

A second test was run later in the day. This time the target word is "bunch," depicted by a bunch of grapes. Almost immediately over the intercom monitor, the experimenters hear Geller muse: "I see drops of water coming out of the picture." Then he talks about "purple circles" (the target was not drawn in color), later affirming that he was certain he visualized the target. His drawing of a bunch of grapes, correct even to the number, twenty-four, matches the target perfectly.

The next day the experimental routine is changed. Geller again is locked inside the shielded room by Hal Puthoff, who stays outside. But Russell Targ remains in his office in the main engineering building almost half a mile away. With Targ is Jean Mayo, a forty-four-year-old art teacher and Ph.D. candidate in parapsychology. Targ is one of her "field faculty." Ms. Mayo, a veteran devotee of Tim Scully's famous electric kool aid acid club, and more recently, of trips on Aquarian biofeedback monitors, is a strong supporter of Geller's powers. She admits to similar abilities, adding that she finds that LSD heightens this psi factor. In the mid-sixties, teaching junior high school children of the Los Angeles-Watts district, Ms. Mayo says that she discovered about "half the children could not read or write. But they had an enormous capacity for telepathic communication." Her academic quest is to find out how different "mental constructs" affect these repressed psychic abilities. The day of the experiment, Sunday, is a special

day for her, anticipated with great excitement. In preparation, she fasted for the previous three days "so I would be clear." Her responsibility: to help "send" the target drawing to Geller using her own psychic power.

Targ opens an English-Russian dictionary borrowed from Puthoff and selects "farmer" as the target word. He tells Ms. Mayo to draw "a Grant Wood farmer with pitchfork." The drawing evolves—neither Targ nor Mayo recalls exactly how—into a picture of a cocky-looking devil holding a trident in his left hand. Targ phones Puthoff and tells him only that the target has been selected. In turn, Puthoff pushes the intercom button and tells Geller to begin his telepathic efforts. Targ and Mayo remain in the office, concentrating on sending the target picture to Geller. For this experiment only, Geller is made aware of where the target is and who is sending it, but not how it was selected. Normally, he was not provided with such information.

Minutes pass. Puthoff hears a succession of frustrated exclamations over the intercom: "I just can't get it." "It's not coming." Finally, Uri decides to pass. Informed of this, Targ and Mayo agree to concentrate on sending a general concept associated with the subject of the devil to aid Geller. They settle on the Garden of Eden. Meanwhile, Geller is encouraged to keep trying. All four participants in the experiment agree to "mesh their brain patterns" in order to facilitate Geller's reception.

At the end of his scheduled thirty minutes, Geller is unlocked from the shielded room and his drawings are collected. Nine separate objects are sketched on the first piece of paper. Two of them are similar and look like biblical tablets with lines radiating outward. One set has "God" written on it. The second set has "Ten Commandments" printed on it. Geller's second sheet of drawings has a large apple with a worm coming out of it, accompanied by the word "apple," several pear-shaped objects, something that resembles a long string bean, and again the tablets, this time with one set mounted above the earth and another set enclosing the earth. His third sheet also focuses on a sketch of the earth with tablets rising out of the North Pole; additionally, it has what looks like two tridents as

well as a tiny apple-like earth with a leaf coming out of the North Pole "stem."

After Geller's drawings were collected, he was shown the target drawing of the devil by Targ and Mayo, who by then had joined him and Puthoff at the shielded room. When Geller compared his responses with the original devil drawing, he jumped with elation and "kissed us three times; he was so excited; he was so moved," according to Ms. Mayo. "He just exploded."

In a "very humble voice," Geller told her: "Don't you know? It's against my religion to mention the name of the devil."

Judy Skutch tells the story differently. According to her, Geller was outraged at seeing the devil as the target, chastising Puthoff and Targ for the selection of such an image. "'Don't you know?'" he yelled at them [continues Ms. Skutch]. "'You don't ever mention that name in a Jewish household.'" Then he spat three times on the floor, in keeping with Orthodox Jewish tradition, to rid himself of possible satanic influence.

Either way, Geller's drawings, though far from exact, are eerily suggestive of the Judeo-Christian concept implied by the devil drawing. One drawing certainly is insufficient evidence upon which to base any generalization. But the possible implications of this result for any theory of psychical phenomena could be important. It seems to indicate that whatever mechanism is responsible for psychic sensing may work along lines of conceptual, Gestalt perception rather than on strictly direct linear perception.

Targ writes: "With regard to the pictures, Geller did draw the trident from the target picture, but he did not draw the man who was holding it. From this it seems clear that Geller does not simply copy lines from the target picture, but rather he does perform some mental processing on them before drawing them himself." Targ's conclusion is much stronger than the facts warrant—at least the facts as he presents them. The conclusion is suggestive only, and far from "clear," based as it is on only one drawing. In fact, responses that are exact replicas, like the grapes, suggest the direct opposite of Targ's conclusion of holistic perception. The issue is highly tentative at best, yet speculatively intriguing.

For the second test that Sunday, Targ and Mayo locked themselves inside the shielded room where Geller previously had been sequestered. There, Targ selected the target, a simple depiction of the solar system, and Ms. Mayo drew it. Kibitzing her drawing, Targ asked his helper, "Why don't you have a rocket ship?"

"It would make it too complicated," she answered.

Geller was with Puthoff directly outside the shielded room, though during the course of the experiment the psychic drifted as far as three rooms away, reportedly searching out a cup of coffee. Attempting to identify the drawing, Uri told Puthoff that he sensed the feeling of "space," but he had trouble visualizing any clearer vision than that. Again he wanted to pass, but he was encouraged to keep at the task.

Informed of his difficulty, Ms. Mayo reports that she worked up an image in my mind of the whole image of *2001: A Space Odyssey*. I concentrated on the music [the opening bars from Strauss' *Also Sprach Zarathustra*].

Almost immediately, Geller remarked, "I'm hearing music." The sketch he finally prepared includes a sun (with the star of David drawn in the center), Saturn with its rings, a rocket ship (debated, but not included in the original target), and the word "angel." As an afterthought, Geller added to the center of the picture the slab from the movie *2001: A Space Odyssey*—all apparently a remarkable example of extrasensory perception.

What is puzzling, however, is that Geller's response sheet also has written on it Jean Mayo's telephone number, including her Sacramento area code. Ms. Mayo has no explanation for it. "I did invite Uri up to the school [where she teaches], telling him that there would be one hundred young ladies excited to see him," and she gave him her telephone number over lunch, she vaguely recalls. Did Geller have the pad with him at lunch? Or did he merely jot down the number once he returned to the experiment area? Or did he write it down after the experiment—an unforgivable breach of protocol? The answer may be innocuous. But the fact that such questions are there to be raised casts doubts on the experimental procedures followed at SRI.

However, that Sunday was a glorious experience for Ms. Mayo. "That day was so high for me," she remembers. "I

felt we were *all* in [telepathic] communication [including Targ and Puthoff]. Walking down the corridor a battery fell at his [Geller's] feet. He was in such a 'high' place." Translated from the argot of transpersonal psychology, Ms. Mayo means that Geller's consciousness was operating on some transcendent level that day.

Jean Mayo acknowledges participating in several of Geller's drawing experiments; yet she had been told by Russell Targ not to admit this, and only with some reluctance does she reveal what she does. Why the furtiveness? "I was there for local color," she explains, playing down her role in the experiments. "When Uri wanted a candy bar, I went to get it for him." Such trips outside the experiment area, she maintains, were made only during the setup of the experiments, not once they had started. Her purpose was to calm Uri, she says, to ease some of the strains and "bad vibes" of the conflicting "energies" at SRI. "I made a point of behaving like a Jewish mother." Her presence is kept secret by Puthoff and Targ, though it is not denied when they are confronted with the fact. But their acceptance of an outside, non-staffer's active participation in the experiments does not square with previous excuses not to allow potential government funders into an experiment just to observe.

The following day an SRI staff psychologist, Charles Rebert, selected and drew the target picture, which he then locked in the shielded room prior to Geller's arrival. The psychic was taken to the area and asked to draw the picture. No one stayed inside with the picture, thus eliminating any direct telepathic link. Geller drew a number of pictures, "all of which he rejected as not being applicable," according to Targ's report. "He said that he got no clear impression and passed." Under SRI rules, Geller was allowed to decline to make a guess on any of his experiments. Even though he drew some pictures—which are not reported—he was granted a "pass" on this target. Nothing that Geller drew in any way resembled the target drawing of a rabbit.

Targ and Puthoff suggest in their official paper that "elimination of the person-to-person link" might explain Geller's failure. Targ also offers a second possibility: "It should be added that the picture was drawn by a scientist

of whom Geller is not fond, and Geller asked at the outset if this was the case. The experimenters said that this was not the case, since they did not know who had drawn the picture. Geller felt vindicated to some extent when he found out that his initial guess as to the artist had been correct."

In all the public memos, reports, and statements issued by SRI during the Geller affair, this is the only hint of the fierce and continuing in-house battle between the psychic researchers and SRI's own psychologists, who were highly critical of the Geller experiments. In part, the livid accusations leveled at Puthoff and Targ stemmed from their exclusion of a psychologist from their research team to aid in designing the experimental protocols. The struggle also is a reflection of the strong skepticism about psychic phenomena in general that is maintained by the SRI psychologists. This skepticism was made clear to Geller and is the reason why he disliked the fifth drawing test, which was prepared by the psychologists. He may also have had reason to dislike this particular test because the controls were tighter than usual.

The next day Geller was back inside the shielded room, this time with several EEG electrodes pasted to his scalp. The researchers hoped to chart changes in his brain patterns during the course of a drawing experiment. The two targets were a tree and an envelope. Geller expressed difficulty each time, did not make a drawing that corresponded to either target, and passed. (The question of why he was allowed to pass after making an attempt is not discussed by the research team.) Nothing worked that day. Hyperkinetic Geller squirmed too much to obtain good EEG records. In a report to the sponsors of this research, Targ notes that "the same skeptical experimenter who drew the rabbit was the EEG operator on this unsuccessful day." He blames psychologist Rebert for Geller's lack of success.

Test protocol varied again for the next day's run, with the experimenters moving into a room adjoining Geller's shielded room, some twenty feet away when they drew their pictures. The first target was a slightly sway-backed camel—drawn twice—that Geller felt unsure about and passed; yet one of the several drawings he produced was a horse that resembled the camel. The experimental pro-

cedure here is a bit unclear, but apparently Targ and Puthoff themselves may have helped select one of Uri's many drawings that best fit the target—a highly suspect procedure. They report that the horse was Geller's "first choice."

All parties then returned to their respective rooms and the experimenters sketched the Golden Gate Bridge with a boat passing underneath. Geller passed after producing three rainbow-like curved lines over three small rectangles.

The third target picture that day was a flying sea gull with an undefinable two-legged creature—perhaps another bird—on the ground beneath it. Geller almost immediately announced that he saw a swan flying over a hill. Again he drew several responses, all of them birds, and he said that he was certain this time.

In the six days Geller spent in this shielded room-laboratory, he clearly hit on four of the ten targets—although Puthoff and Targ count seven hits. Their method of judging was to have two unnamed SRI scientists take the targets and the responses and try to match them. However, they leave the issue of judging somewhat fuzzy, since they include drawings (#3, tablets; #8, horse; #9, curved lines) on which Geller chose to pass. It seems these "pass-hits" should be confined to a separate category for correct scoring procedure. If not, then the responses Geller drew on his other passes also should be included in the final judging. In other words, the concept of "pass" in the experimenters' minds apparently is that it is not a pass if any of the Geller sketches appears to match the target, but it is a pass if none of them seems to match—and the selection is done by the experimenters, which is totally unsatisfactory for the premise of the experiment. Protocol errors notwithstanding, Geller did make some extraordinary hits.

But there is more to come. Puthoff and Targ arranged to test Geller's paranormal powers against a powerful PDP-11 computer. Geller was placed inside a copper screened Faraday cage on the second floor of the SRI engineering building in the Radio Sciences Facility. This small cage, about ten feet long and five feet wide, is cramped by an electronic workbench that runs the length of one side. The area is used to test sensitive radio receivers outside the influence of any stray radio energy,

most of which is blocked by the double copper screen surrounding the enclosure. During Geller's test, all electric lines leading outside the cage were disconnected, thereby preventing any attempt to pass covert information in to the psychic over these hardline connections. The cage also was tested and found to keep out all walkie-talkie signals. Down the hallway about one hundred sixty feet from the copper cage is a low-lit computer room that is filled with the blinking red lights of a medium-sized computer connected to a video display console. There, Targ threw a set of dice to determine "randomly" which of several pictures stored in the computer's memory would be displayed. Noting the number, he punched the appropriate console keys and the computer, answering his command, drew on the cathode ray tube display the picture of a kite, which was to be Geller's target. Targ moved back about ten feet from the video display and continued to stare at it throughout the experiment.

Geller was instructed to begin. Hal Puthoff, stationed outside Geller's cage, monitored him at all times. "It hurts his feelings, but he realizes it was necessary," says Puthoff, who was kept ignorant of the choice of targets.

Shortly after the test began, Geller asked Puthoff to call up the computer room to ask: "Is the target picture a geometric picture or an object?" Through Puthoff, Geller was told that the target was an object. His first drawing was a square with the diagonals drawn in; after, he sketched some triangular airplanes, then passed. The first drawing, signed with a flourish, is considered by the SRI team to be "a good representation of the actual target picture."

The following day, two pictures were drawn on the video display with a light pen, then stored in the disc memory. The display screen was erased, leaving no trace of the two target pictures. They had not been drawn on paper. "There was no place you could look in all of space/time to find those picture representations," comments Targ, alluding to the fact that only a series of magnetic ones and zeroes stored the concept of the target picture inside the computer memory. The first target was a church front with a cross at the top. The second was a valentine heart with an arrow piercing it. Geller had trouble getting any signal

from the computer memory. His first effort looks like an upside down martini glass with a laboratory beaker—perhaps the mixer—alongside, and some other doodles. His second effort is even more unrecognizable. Puthoff's and Targ's conclusion: "It is clear that both of his attempts have some elements in common with the target drawing, but he had no idea that it was a church, and he passed."

In an effort to make the next target easier for Geller to pick up, the valentine heart image was called up from computer memory and stored on the video display. The light intensity was turned down to the point where the picture was not visible to a bystander when the room lights were turned on. Geller immediately drew an arrow under a small rectangle—for some reason the experimenters call this a "rounded brick." Next, he sketched an arrow inside a suitcase along with an unrecognizable object. The experimenters log the second try, an arrow inside the suitcase, as a hit. Thus, according to them, Uri scored two out of three successes working with the computer. From this limited number of tries, Targ hypothesizes that Geller either used clairvoyance to discern the pictures stored in the computer memory, or he operated telepathically, "since there were several people in the computer room, all of whom knew the nature of the target that was stored."

This raises a point that Puthoff and Targ never confront publicly. They were not the only persons witnessing Geller. His SRI experiments tended sometimes to be more like full-blown stage performances than private experiments. On many occasions people not associated with the experiment clustered around, kibitzing the procedures. Sometimes members of the SRI management hierarchy were there to observe. Bart Cox maintains they were checking up on Targ and Puthoff. At other times the audience simply was a group of psi boosters. Regrettably, Puthoff and Targ have not published the names of those people who were present during Geller's testing or what they were doing.

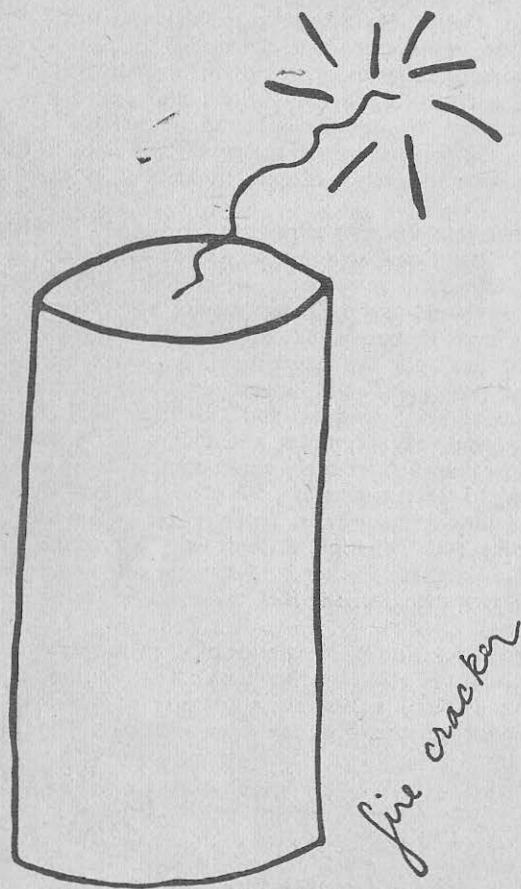
"All that confusion was too much for me," recalls Ingo Swann. "It was like a monkey cage, a circus. Nobody went unaffected by it." Swann recounts the story of Geller and his SRI retinue discussing the day's poor results in the office of Eli Primrose, an assistant to Puthoff and Targ. A

A Firecracker, Grapes, and the Devil

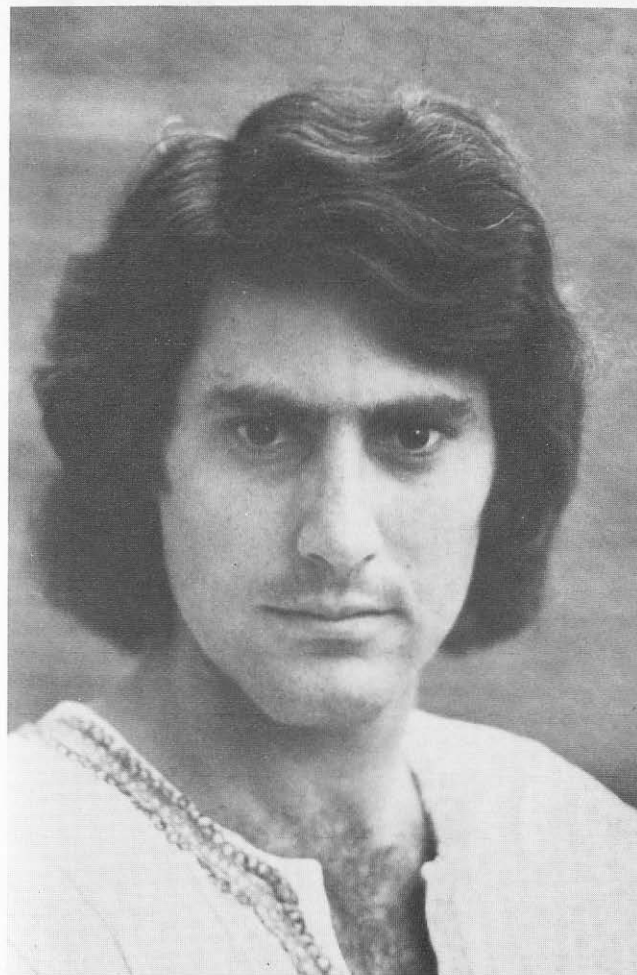
THE SEARCH FOR SUPERMAN

TARGET #1

FUSE (FIRECRACKER)

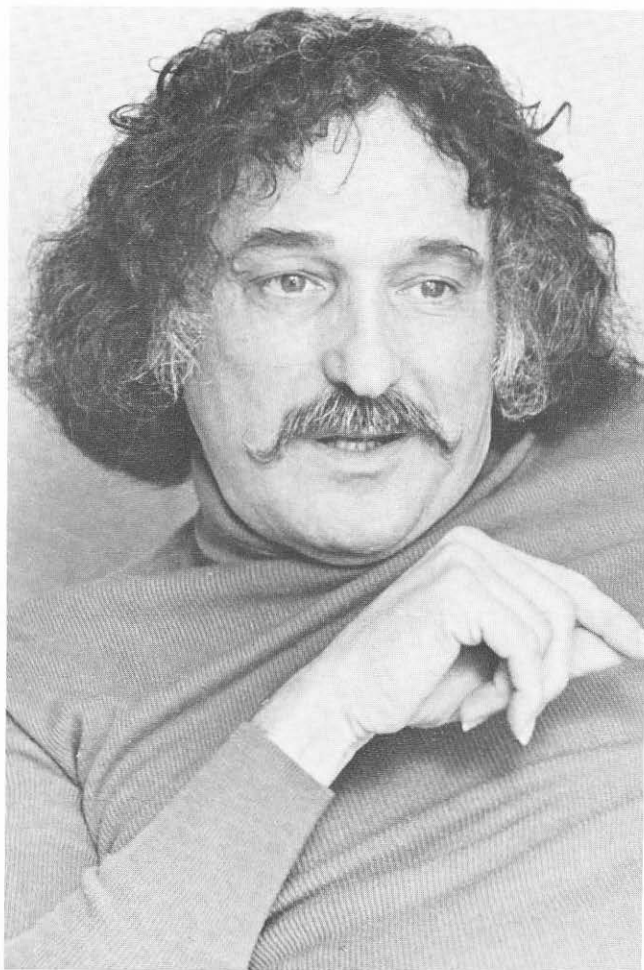


fire cracker



Uri Geller

© 1974 by Yale Joel



Andrija Puharich

© Psychic Magazine Inc.

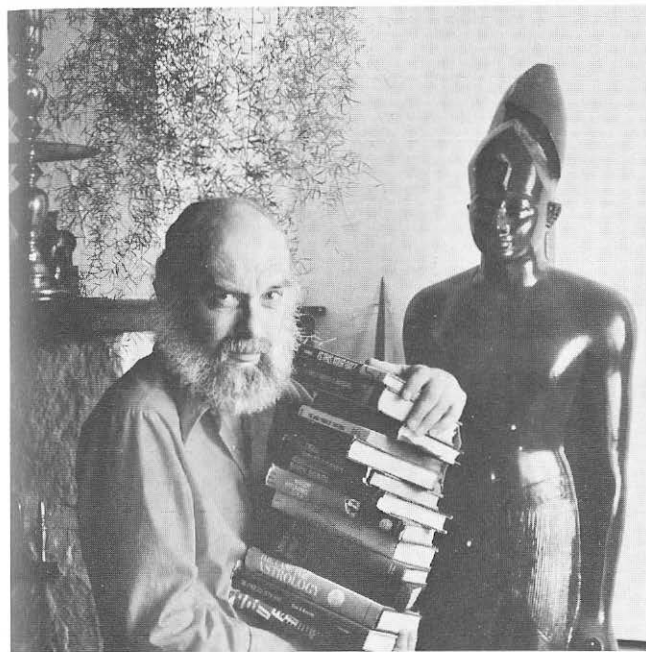


© Stanford Research Institute

Dr. Harold Puthoff adjusting Stanford Research Institute magnetometer for Uri Geller experiment



© Stanford Research Institute
Stanford Research Institute headquarters building, Men-
lo Park, California

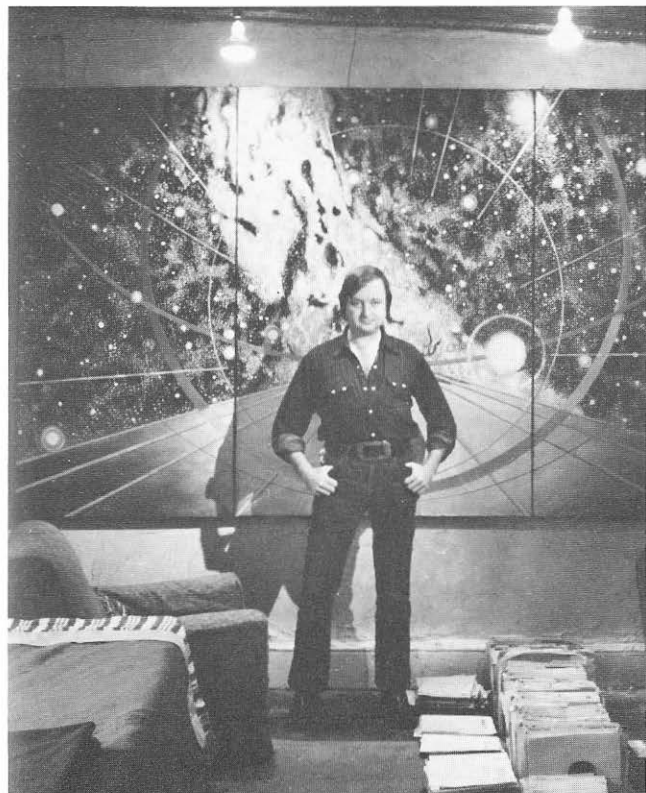


© Henry Groskinsky

Randi



© Stanford Research Institute
Stanford Research Institute's Russell Targ and Harold
Puthoff examine Uri Geller's "levitation" results



Ingo Swann

© Henry Groskinsky

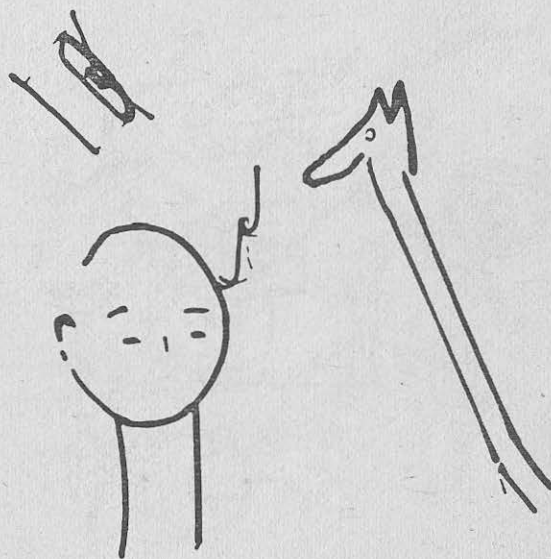


Patrick H. Price

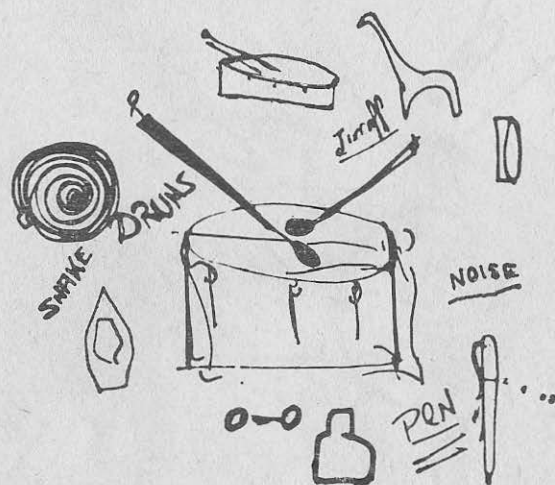
© Stanford Research Institute

A Firecracker, Grapes, and the Devil

First Response to Target #1

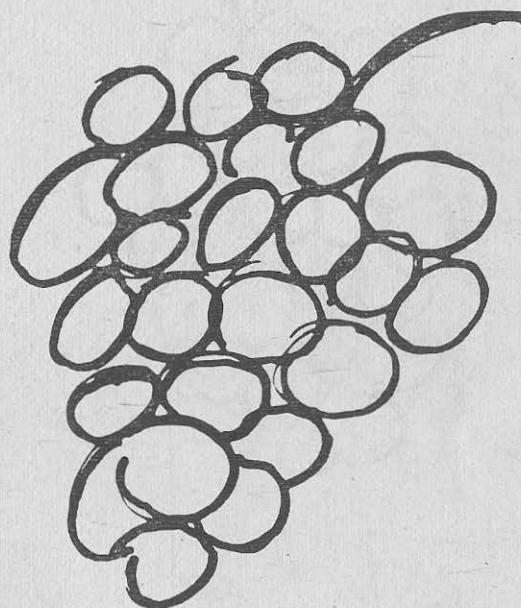


Second Response to Target #1

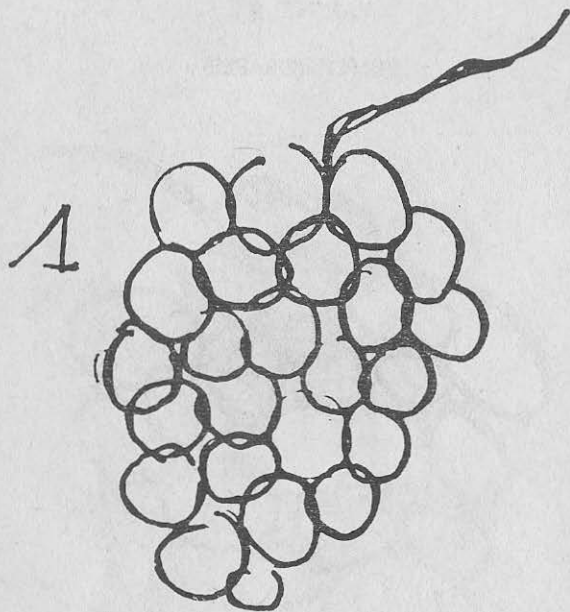


TARGET #2

BUNCH (GRAPES)



Response to Target #2

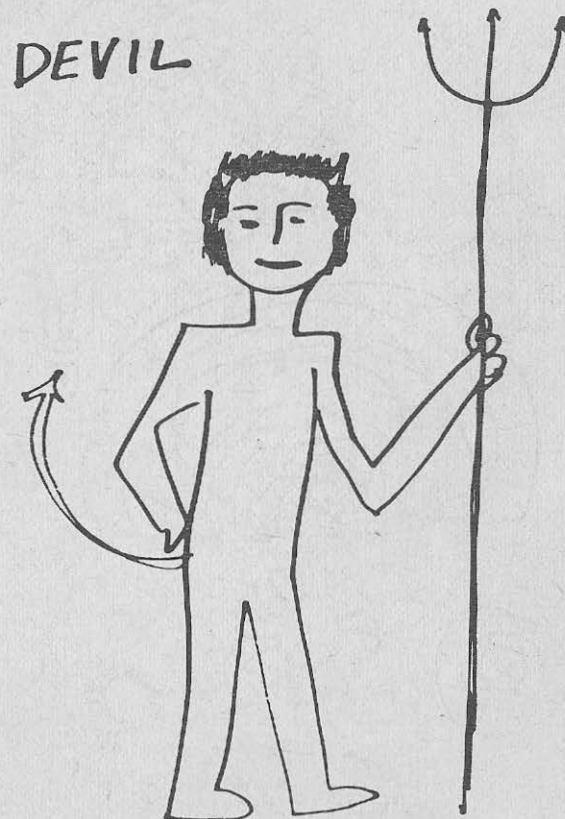


42

AB

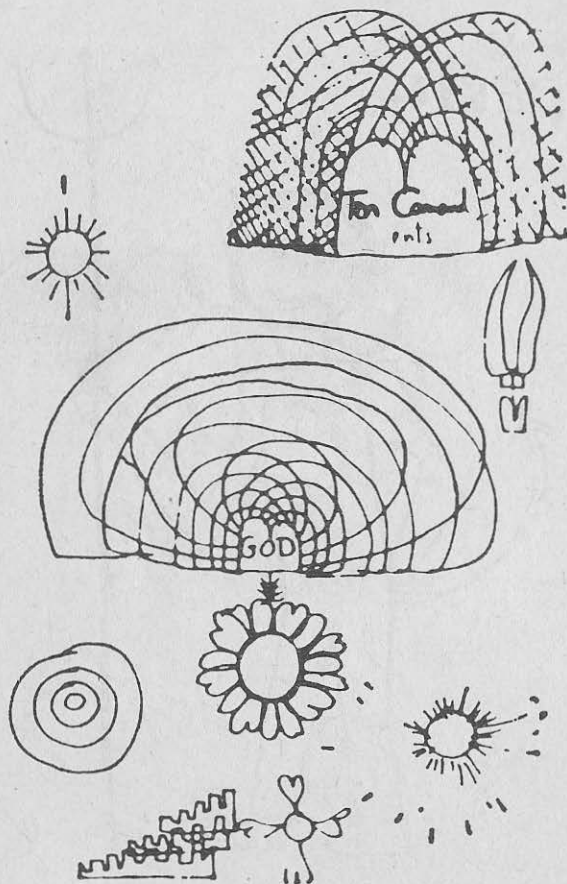
TARGET #3

FARMER (DEVIL)



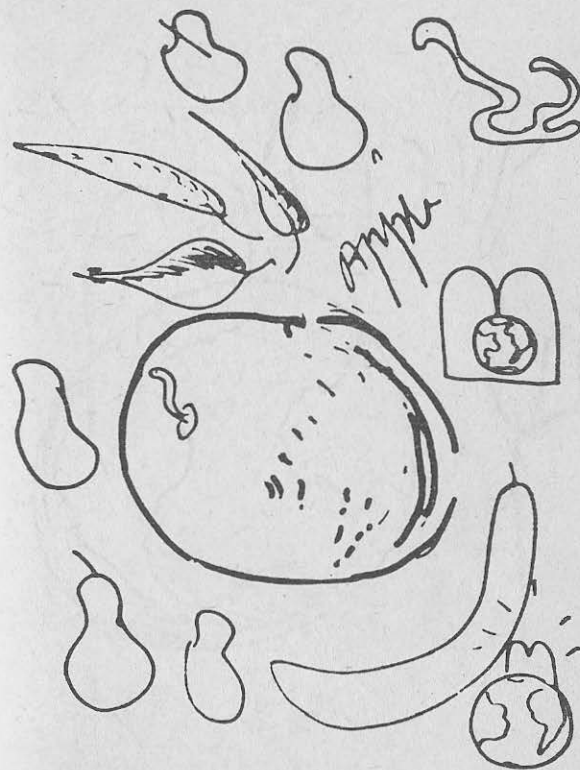
THE SEARCH FOR SUPERMAN

First Response to Target #3



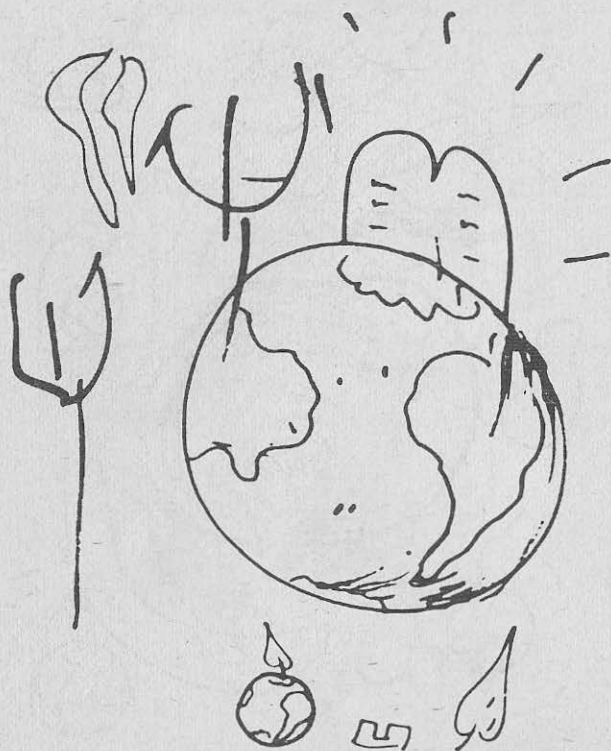
A Firecracker, Grapes, and the Devil

Second Response to Target #3



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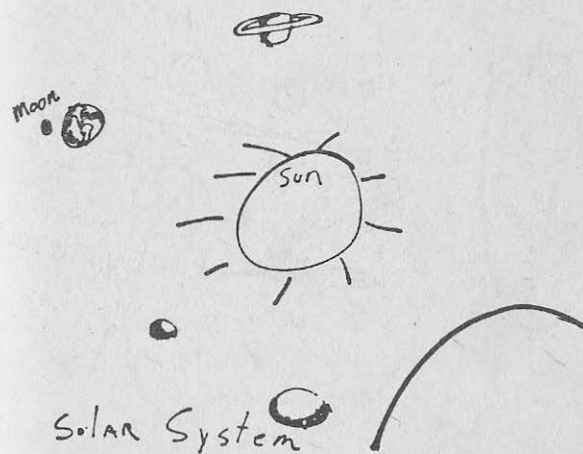
Third Response to Target #3



A Firecracker, Grapes, and the Devil

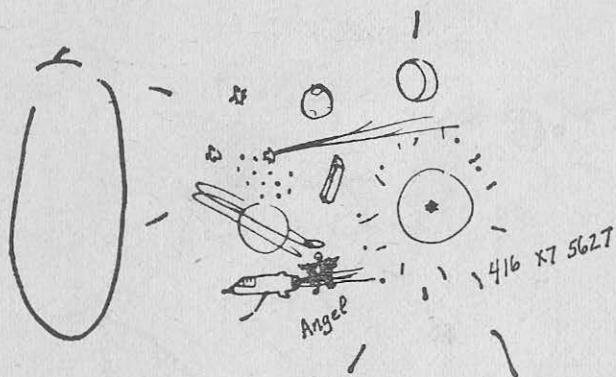
TARGET #4

SOLAR SYSTEM



THE SEARCH FOR SUPERMAN

Response to Target #4*

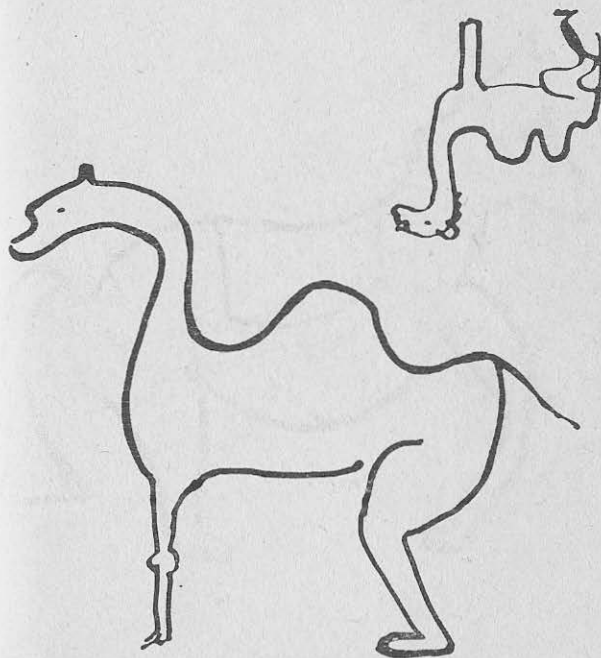


* Note Jean Mayo's telephone number on the right side of the illustration.

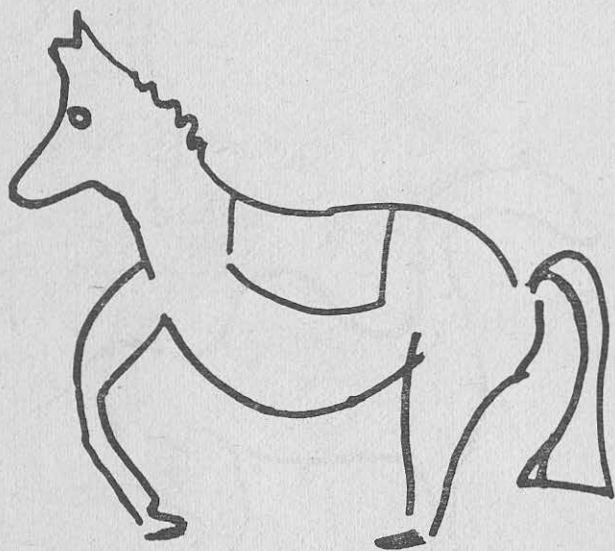
A Firecracker, Grapes, and the Devil

TARGET #8

CAMEL

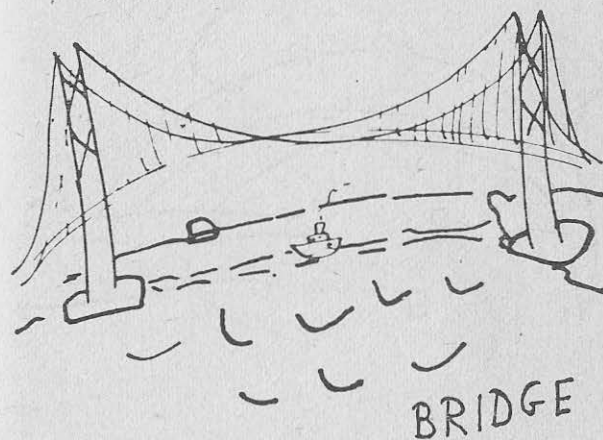


Response to Target #8

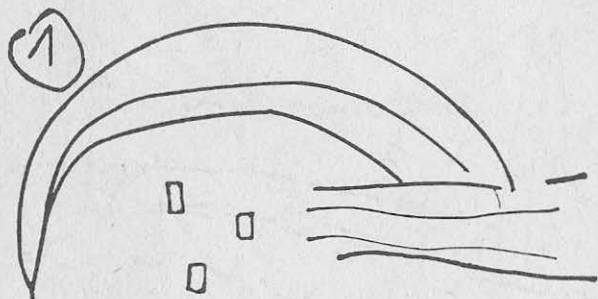


TARGET #9

BRIDGE

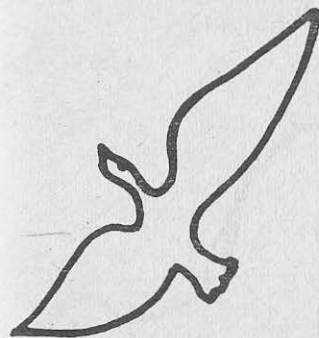


Response to Target #9



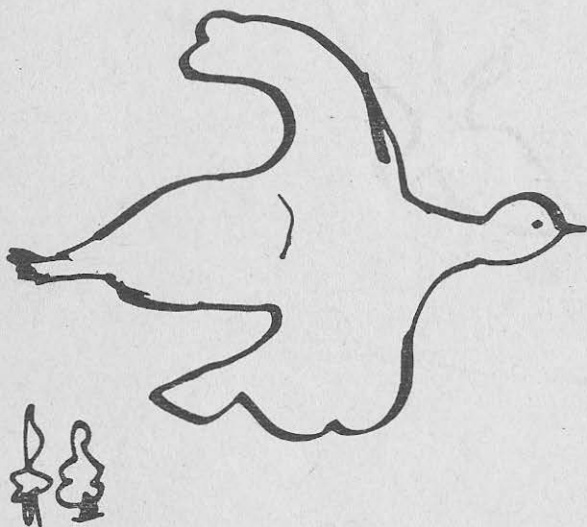
TARGET #10

SEA GULL



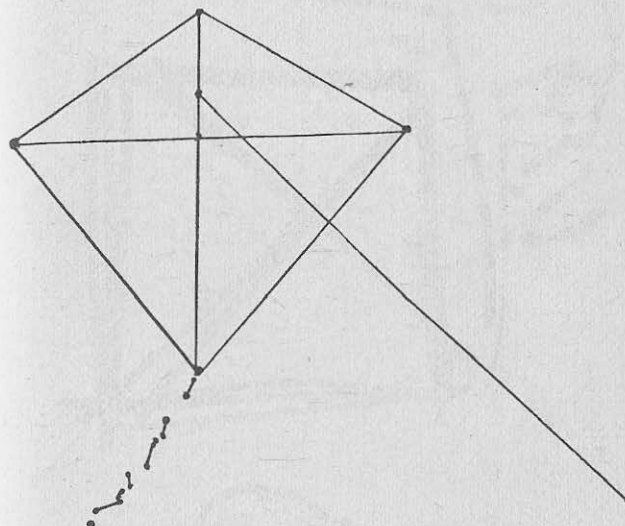
URI GELLER
782 '7116

Response to Target #10

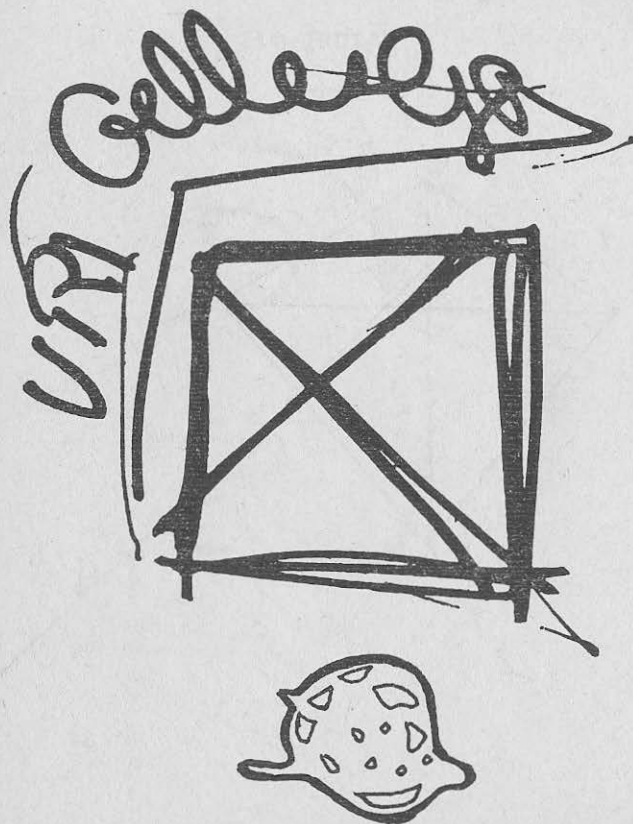


TARGET #11

KITE

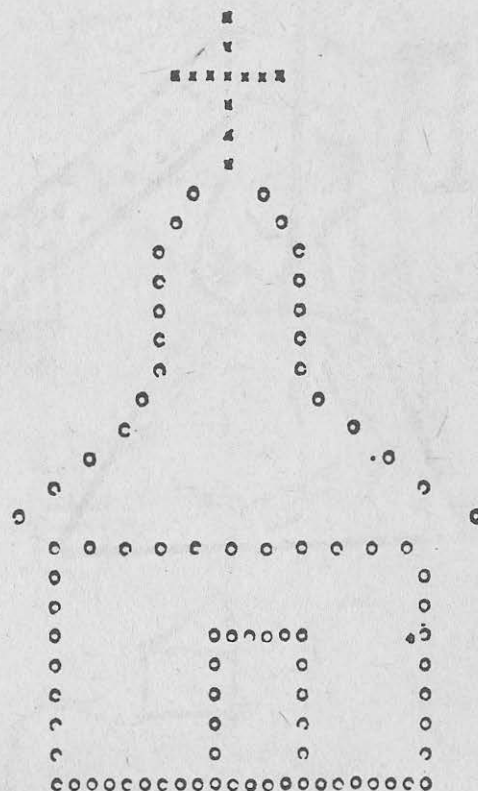


Response to Target #11



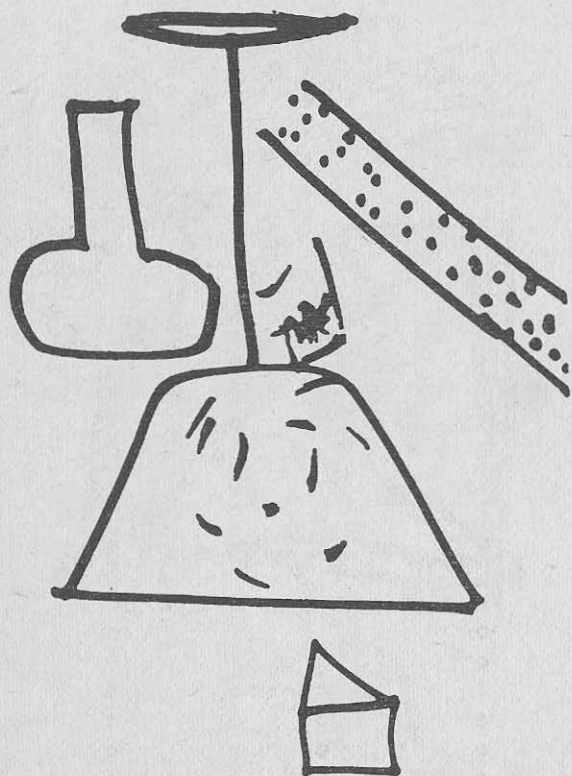
TARGET #12

CHURCH
(computer-drawn)



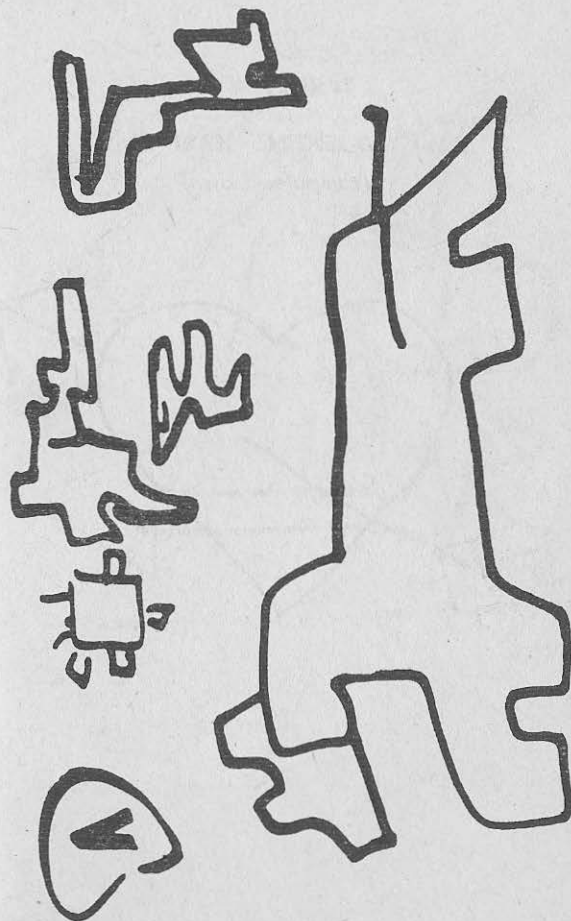
THE SEARCH FOR SUPERMAN

First Response to Target #12



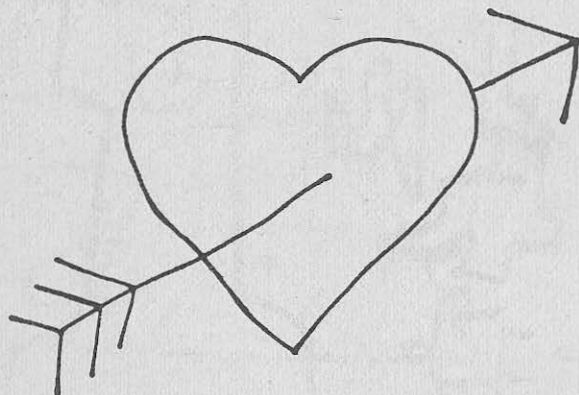
A Firecracker, Grapes, and the Devil

Second Response to Target #12

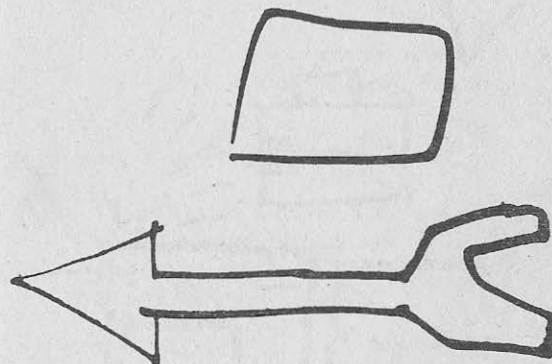


TARGET #13

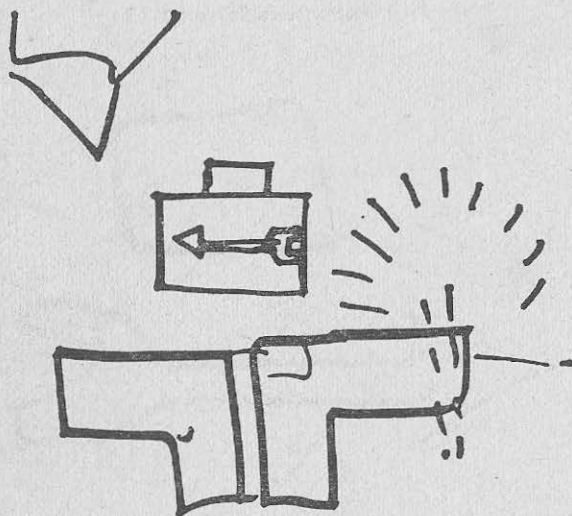
VALENTINE HEART
(computer-drawn)



First Response to Target #13



Second Response to Target #13



VERGERUS (Royal Medical Counselor): . . . Your husband holds the opinion that intangible and inexplicable forces really exist.

OTTILIA (Egerman's wife): And you deny that possibility.

VERGERUS: It would be a catastrophe if scientists were suddenly forced to accept the inexplicable.

EGERMAN (Consul): Why a catastrophe?

VERGERUS: It would lead to the point where we would have to take into account a . . . that we would be suddenly forced to . . . logically we would have to conceive of . . .

EGERMAN: A God.

VERGERUS: A God, if you like.

STARBECK (Police Chief): A grotesque thought, and besides, it's not modern. Science today is better equipped than ever to penetrate all the obvious mysteries.

EGERMAN: Obvious?

VERGERUS: Everything can be explained.

—Ingmar Bergman,
from "The Magician"

ARPA COMES CALLING

A MAJOR CHAPTER IN THE URI GELLER SAGA TOOK PLACE in December, 1972, near the conclusion of his first five weeks of official testing at SRI. A three-man team of Department of Defense psychologists under the auspices of the Advanced Research Projects Agency (ARPA) visited the Menlo Park facility "fully prepared to fund" some of the psychic research. ARPA's deputy director of human resources, Dr. George Lawrence, a mercurial, modishly dressed thirty-nine-year-old, led the truth squad. With a background of research in counterinsurgency, pain, sleep, and aggressive behavior, Lawrence's job is to fund exotic programs in biofeedback, brain-driven computers, and other far-out behavioral investigations. In 1972 he flew to Scotland to scout an international psychic convention, and since that time he has continually probed the mainstream of parapsychological research, fishing for possible projects to support. Though the ARPA psychologist dismisses psychokinesis as "ridiculous," he does believe that "there may be some means of information transfer (telepathy, clairvoyance), however I'm not convinced of it."

A few years back, members of Congress, responding to publicity touting Soviet psychic research, quietly prodded the Pentagon to get cracking with projects of its own for fear this country would find itself faced with a "psychic superman gap." Under such pressure, Lawrence's superior, Air Force Colonel Austin Kibler, already had made a special trip out from Washington to see Geller. He was impressed, not so much with the psychic or his experimenters, but by the apparently wide support Geller had among higher-level SRI executives. So Lawrence and the two psy-

chologists accompanying him were dispatched to survey the scene and come up with a definitive judgment about Geller and the SRI research.

Kibler, wanting an experienced hand on the scene, asked University of Oregon psychology professor Ray Hyman to sit in on the SRI visit. Hyman's credentials for judging such work are excellent. A former professional magician, he now teaches a course in "pseudo-psychologies" that debunks astrology and other occult favorites. He also authored an undergraduate textbook on the nature of psychological inquiry. For several years ARPA has funded his work in man-machine interactions and the problems of information overload. He has been involved in several similar "debunking" missions. A small man in his mid-forties, Hyman has the energy and tenacity of a marathon runner, which he is. The professor confesses that in earlier years, as a performing mind reader, "I thought that I had psychic powers. You play a role long enough and you become a believer." Today he remains a skeptic about the reality of paranormal powers, yet, according to him, he is an open-minded doubter. An important aspect of Hyman is that, of all the skeptics bumping around in the Geller story, he has a personal belief structure that seemingly would suffer least if psychic phenomena became accepted as a scientific reality. "Maybe there is something we still don't know that can convince us," says the open-minded psychologist. "I wouldn't be upset if Uri could do those things."

University of Virginia Medical School professor of clinical psychology Robert Van de Castle, who has been a close friend of George Lawrence since their graduate school days at the University of North Carolina, was the third investigator. At the time, he was a director of the Sleep and Dream Laboratory at the university and a twenty-year veteran of psychic research. "I think a substantial case can be made for parapsychology," asserts Van de Castle, estimating that there is a ninety-nine percent chance that telepathy and clairvoyance are actual phenomena; perhaps only a fifty-percent possibility for precognition, and slightly more for psychokinesis. He also is "open to the possibility" that out-of-body experiences are indeed true, but he prefers to see more evidence than is presently at

hand to support such claims. "We're just scratching at the surface there," he says. Van de Castle was the "believer" on the team.

Were it not for the importance the ARPA visit plays in the entire Geller assessment, that day would be worthy of a Marx brothers scenario. Hyman had been snowed in at Eugene, Oregon. The temperature dropped below zero for the first time in the city's recorded history, forcing Hyman to catch a three A.M. Greyhound bus to Portland to catch a plane, to get a car, to arrive at SRI on time—which he did not. "In many ways, this was the most adventuresome and wonder-filled portion of my long day," he laughs.

Lawrence and Van de Castle flew west the day before and enjoyed a late-night Chinese meal in San Francisco. When the two psychologists arrived at SRI shortly after nine the next morning, Hyman was not there, Geller was not there, and Lawrence was asking for a doctor. "It must have been the seaweed and black mushrooms," he groaned, dashing to the men's room, where he spent much of the day tending a variation of the Chinese dragon dance. Since Lawrence was the man SRI had to impress if any funding was to be forthcoming, runners would shuttle in to him periodically bearing news of the latest Geller accomplishment.

The star finally waltzed in at about ten-thirty in his usual casual attire—faded lavender T-shirt, corduroy slacks, and square-toed mod shoes—and greeted the experimenters on a first-name basis. Geller displayed, to Hyman's professional dismay, unusual camaraderie with those who were studying him. The Oregon psychologist suggests that such closeness with a test subject threatens objectivity. SRI experimenters insist such rapport is vital to the production and enhancement of Geller's powers. Both sides are right. It is a question of degree.

The psychic was left alone with the three psychologists in the ersatz "waiting room" that serves as a lab, while Puthoff and Targ retired to view the proceedings over a closed-circuit TV monitor. Geller followed his customary routine, first guessing numbers, colors, and capitals. He asked Lawrence to write a number from one to ten on his pad, "as large as possible."

Hyman, sitting between Geller and Lawrence, recalls

the scene: "As he [Lawrence] wrote, Uri made a show of covering his eyes with his hands. From my side, I could see his eyes through his hands. Also, I could easily see from George's arm motions that he had written the number ten. Uri, deliberately letting me see his pad, first wrote a zero, then the one. He seemed puzzled. Then turned his pad upside down and said, 'Of course, it is a ten.' He then picked up George's face-down pad in such a way that it, too, was upside-down. He made much out of the fact that not only had he gotten the number correctly, but he received it upside down because George had placed his pad down in a certain position."

From then on, in Hyman's estimation, Geller's performance was all downhill. Van de Castle was to be the recipient of a number from ten to twenty that Geller would project. The psychic showed Hyman the number he was trying to send: "17." The University of Virginia psychologist did not get a clear message, but he did get a fleeting glimpse of a number. What was it?—"17." "Uri, in triumph, explained that when he is projecting a number he visualizes it on a screen," continues Hyman. "At the moment it is implanted on the receiver's psyche, it disappears from Uri's screen. In this case the number had disappeared for an instant, but reappeared almost immediately." There is no way to check.

In another test of thought projection, Geller asked all three visitors to write down a capital city. He wrote something on his pad and closed his eyes, head nodding. Then he stopped, crossed out what he had just written, and scribbled something on another pad, then returned to nodding his head, eyes apparently closed. Hyman wrote down Rome or Stockholm. Lawrence and Van de Castle each had Paris. "I knew that would happen," said Geller, opening his eyes and checking the responses. "But I changed it because it is too common." He indeed had crossed out Paris and substituted Warsaw on the second pad.

Hyman recalls the scene: "Van de Castle, trying to be helpful, said that he had considered Washington. While Uri and Van de Castle were deciding that Van de Castle had received only the WA — — — part clearly and then had filled in the rest by guessing, Puthoff, who had been at the other end of the monitor, came dashing into the

room announcing triumphantly that he had thought of Warsaw."

Moving on to metal-bending, Lawrence gave Geller his nail clipper and the usual routine ensued—concentrated fist passes, clenches, urgings, and eventually direct stroking of the clipper. But nothing. Other items were solicited. Car keys? No, Lawrence would need those to drive back. Screwdriver? No, it was not "personal" enough. Lawrence's watch? No, it is electronic. Finally, Geller settled on Hyman's old-fashioned, spring-wound wristwatch. Try as he might, he could not get it to move ahead in time. According to Hyman, Uri's real purpose remained focused on the nail clipper. "Why don't we try the nail clipper again?" suggested Geller at the end of his futile tries.

"He produced the nail clipper, which had been in his possession all the time while we were being distracted by the screwdriver and the watch," reports Hyman. Geller placed the clipper in Lawrence's hand and immediately had the psychologist cover it with his other hand. Again the familiar Geller gestures. When Lawrence lifted his covering hand the clipper indeed was bent. Everyone rushed into the Xerox room to get a picture copy of the clipper in case it bent further. The ARPA psychologist kept the nail clipper in his possession, and later in the day, after a comparison, he found no change in the bend.

Lawrence did provoke some excitement, however. After Geller managed to move a compass needle five degrees, the ARPA man made it veer forty-five degrees by imitating the psychic's movements (including stomping on the floor). The startled psychic accused Lawrence of trickery, and the SRI experimenters wanted to search him for hidden magnets. "Targ dismissed George's performance on the grounds that he had not been examined with the strict controlled scrutiny that Uri undergoes," says Hyman. "The irony of this remark was that at no time had Uri been examined by anyone. And when I once asked the physicists if they had examined Uri for hidden magnets or something when he had apparently made single frames of a videotape disappear, they said that it was completely unnecessary since it was completely beyond the realm of plausibility that any object Uri might have hidden upon his person could wipe out exactly one frame at a time."

Geller scored a minor telepathic success that day—according to some. Van de Castle cut out a magazine illustration of a gingerbread man crying crocodile tears, sealed it inside a brown business envelope, and asked Geller to guess it. The psychic hesitated, saying that he did not think he could receive magazine pictures, only line drawings sketched by the sender. So Van de Castle drew the cartoon from memory, matching as best he could the original illustration. Lawrence, who did not know what either of the pictures looked like, sat down with an envelope in each hand and Geller tried to guess clairvoyantly what the pictures were. No luck. Later in the day, Geller asked Van de Castle, who had kept the drawings in his jacket pockets, to go alone into a room with him while he tried to telepathically view the pictures. Once inside, Van de Castle took out his drawing at Geller's urging and placed it—still inside the envelope—on a desk under his left elbow, leaning on it with pressure. Geller then asked him to close his eyes and cover them with his hands in order to "better visualize" the picture.

"I had to sit with him for a half hour," says Geller, "because I wasn't used to this guy, I was used to Hal and Russ. With Hal I could do it immediately. I could say the envelope has an airplane inside of it and I drew it. But when the new guys come, I have to get accustomed to the vibrations. I told him I couldn't do it; I didn't get anything from him in the beginning. He said, 'Listen, I'm trying.' Then I saw that the guy is really trying with me, not like the guys from Washington [sic]. They were trying to fool me." Geller stood behind Van de Castle, close enough for the psychologist to feel his hair brushing against the back of his head, "trying to get contact." At Geller's suggestion, the psychologist—eyes still closed—visualized his drawing part by part, beginning from the top. Geller would then interrupt, exclaiming that he got in turn the head, arms, and torso. Van de Castle stresses that he tried hard not to give out any verbal clues or openly confirm whether Geller was seeing the right image.

"I've got it!" cried Geller.

"Well, there's something else, Uri," hinted Van de Castle. The psychologist then concentrated on the large tears that streamed out of the eyes of the drawing. But

Geller was too agitated about his apparent success with the sketch and responded that he could not go any further in the demonstration. "I opened my eyes, I looked down, and the envelope was still there under my left elbow," swears Van de Castle. The psychologist opened the envelope and compared the drawing with Geller's, which had a definite resemblance to the original. The second envelope was still unopened inside Van de Castle's jacket pocket, he says.

Hyman believes that Geller got to one of the two envelopes, perhaps dabbing one with carbon tetrachloride to make the image inside show through. Van de Castle counters that he would have smelled such a vile-smelling chemical. No one—except Geller—concludes that the drawing proved anything definite. Van de Castle admits that the psychic's success with him is only "encouraging," sufficient to commit more effort toward further investigations.

About four P.M., Geller was "burned out," Lawrence was sick and testy, Hyman had grown extremely skeptical, and the SRI researchers saw their funding flying out the window. It was time to quit. Geller left, apparently to go home. But he charged back about a half hour later with a warning for Lawrence. Don't fly to or from Washington for the next five days, he cautioned. Van de Castle admits that he took Geller's precognitive warning half seriously after the psychic assured him that his premonitions always came true. Someone called a newspaper to check if there had been any plane crashes. There had. But the flight—the same one that carried Mrs. Howard Hunt to her death—originated in Washington and crashed in Chicago at about noon. That left Geller more than enough time to switch on his car radio after leaving the group, hear the news, then dash back to warn them of his "premonition."

At day's end the three psychologists caucused. Van de Castle, though dismayed at what he believed to be terribly loose investigation by Puthoff and Targ, suggested that there were enough "hints and nuances and inklings" to warrant further extended research. He wanted to get Geller into his own laboratory in Virginia where "definitive" tests might be conducted. Both Van de Castle and Hyman noted that Lawrence's post-lunch mood toward Geller grew quite grumpy, if not outright truculent. Later that evening, Van de Castle chastised his old friend: "I don't think you can

just breeze in the way we did, be there such a short period of time, then leave, and really get to see anything. Frankly, George, while we're talking, I found your attitude rather irritating today. You just seemed to have your nose out of joint; you were expressing your irritability toward Geller. If you're going to work with a sensitive like this, I agree you have to have good control conditions, but you also have to try to treat him a little bit more gently or with a little bit more understanding."

Hyman's conclusions about Geller remain solidly negative. "I must say that there was not a single thing that Geller did that I could definitely say was cheating as such, but there wasn't a single thing that he did that couldn't have been cheating—easily, not just almost, but easily. Everything he did—all the deceptions, all his misdirections—were quite consistent with exactly what I would do," observes the former magician, noting with admiration that "the misdirections are beautiful." Hyman's recommendations about Geller and the two SRI experimenters? "The funding agency [should] send them on a tour of the Soviet Union—and pray that they defect."

But Lawrence, conscious of congressional pressures to investigate paranormal realms, was not completely satisfied by the post-Geller critique. A few days later he returned to SRI, this time with UCLA psychologist Gerry Shure. Shure is a magician in addition to having academic expertise in social psychology and experimental methodology, excellent background from which to make a judgment. Though he is basically a skeptic, Shure maintains that he is open-minded about paranormal phenomena, "since I've had one or two experiences in recent years that were really rather puzzling." Under the previous ARPA scrutiny, Geller was not told that Hyman was also a magician for fear he would be offended and would refuse to perform. Shure was under no such constraints. After each attempted demonstration, the UCLA magician explained in front of Geller how the effect could have been accomplished by conjuring. The young psychic hit the ceiling.

"I saw his negative vibrations immediately," Geller recalls, shouting angrily. "These psychiatrists [sic], they don't believe in these things. So I had a talk with him [Shure]. I

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listened and he was talking about magic and was saying, 'Well, you know, some of the magicians can do this.'

"'You know, you're a Jew and I'm a Jew and this is what I'm going to tell you,'" Geller roared at Shure. "'You are the guys who are spoiling all these tests.' And I told this guy from Washington, 'You see, just because of these guys, of people like him, who do not believe and don't give a chance to people who have powers to express themselves, who immediately talk about magic, cheap card tricks . . . these are the psychiatrists you're bringing here . . . because this is the reason that Russia is going to beat the shit out of America in psychic research!'" At this point, Geller is boiling. The scene, even in recollection, still angers him. "I got fed up because the guys came every day with envelopes, and I got fed up with it. What are they trying to do? I'm not working for the government. Go to hell with the government. I'm working for SRI. So that made it. They left and never came back again."

Shure's opinion? "I think they [SRI] were duped," and the experiments were conducted "with a great deal of sloppiness." Hyman fully agrees about the sloppy SRI protocols. Publicly, Lawrence now considers Geller a fraud. Months later, however, he still admits to doubts. Concerned about historical judgments, the man from ARPA does not want to be known as the bureaucrat who overlooked the potential of psychic research when it was so seductively close.

But this still does not answer the question: Is Uri Geller for real?

Thus sang the magician; and all who were gathered there went unwittingly as birds into a net of his cunning and melancholy lust.

—Friedrich Nietzsche,
from *Thus Spoke Zarathustra*

GRABBING THE CHEESECLOTH

THE AMAZING RANDI'S HANDS MOVE FASTER THAN HIS mouth—an impressive feat, considering his long experience as a quick-gabbing, all-night-talk-show veteran. Flash, a bent ten-penny nail in place of the straight one. Poof, a wilted house key. Scrunch, a busted spoon from New York's Brass Rail. James Randi (real name, Randall Zwinge) usually can be found decapitating rock star Alice Cooper, breaking out of the Manila jail, or being frozen in a block of ice in Times Square. More recently, he has gained fame (some say infamy) as a rabid debunker of psychics—particularly Uri Geller. Nonstop, this Canadian-born self-declared child-prodigy-turned-illusionist strives to erase the notion that the Israeli might be anything other than “just a clever magician.”

“I know that men of science are easier to fool than ordinary people,” declares the professional magus, “because they think logically. They’ve used logic to come to the wrong conclusion.” One of Randi’s stage tricks is to float a beautiful girl inside a welded aluminum frame. “To have a scientist give you a description of my levitation trick wouldn’t be worth a piece of shit!” he exclaims, because logically thinking people are used to perceiving the world in always straightforward, mechanistic, cause-and-effect fashion. All conjuring is based on the simple, yet powerful, principle of misdirection. The magician subtly manipulates the logical mind by guiding it to perceive the event it expects, thereby camouflaging the conjuring—the secret move, the sleight of hand, the substitution, the reversal. This is the basis for all magic. According to Randi, and a tight-knit

clique of other magic-oriented psi skeptics, that is all there is to the stunts of Uri Geller and other psychics.

Randi maintains that he has never seen any convincing evidence of paranormal occurrence, that such claims always can be explained—to his satisfaction—by trickery or misperception: “I can’t deny it [psi phenomena] because I can’t prove the nonexistence of something, even if I felt I should. There is every possibility that there is some phenomenon that exists today that we cannot presently explain; not unexplainable—unexplained.” Geller’s arch enemy pleads for a magician to be present each time a psychic is studied to help avoid falling into the trap of logical misdirection. “When I’m sick, I get to a doctor,” argues Randi. “When I want to find out if there is chicanery being used, I get to a charlatan. Here I am; I’m available.” (Randi fails to mention that the extensive publicity garnered from his debunking of Geller has not hurt his career—far from it.)

A few weeks after my session with him in Ossining, Geller was invited to perform before a group of *Time* editors in New York. The psychic was still basking in the first flush of his United States publicity, scoring big on TV talk shows, in executive suites, and at socialite dinners. He arrived with the ever-present Puharich and settled himself on an office couch amidst a crowd of skeptical witnesses. James Randi was up front, posing as a *Time* reporter, along with fellow debunker Charles Reynolds, picture editor of *Popular Photography* and a member of the American Society of Magicians’ Psychic Investigation Committee. Geller started off with a few mental routines, scoring moderate successes, all of which Randi insists depended upon “the law of averages and a little bit of skullduggery.” For example, when guessing a city, Geller wrote both Paris and London on his pad, but he crossed out London. One member of the *Time* audience was thinking of London, which Geller then claimed he “got first,” but decided against. “I knew when I heard him do this,” says Randi, “that the guy wasn’t just some klutz who had gotten lucky on good looks. The guy is extremely clever, very cunning.”

Geller betrays his professionalism in magic in several ways, argues Randi. For example, he points in the general direction of a group of people volunteering to project a

mental target instead of citing a specific person, thus increasing the odds that at least one person in the group has thought of the target that Geller guesses. Unveiling more professional secrets, Randi says that magicians are well aware that people are most likely to name the numbers "3" and "7," the cities London or Paris, the color red, a rose, a chair, and a triangle with a circle inside, all as first responses for various categories a mentalist calls for with his statement, "Quick now, the first thing that comes into your mind." Randi also accuses Geller of "pencil reading" (watching the top of a pencil as it is used to trace out a target) and of listening to the sound chalk makes on a blackboard (a "4" sounds different from a "2," for example)—all standard techniques in a magician's bag of tricks. Potential audience embarrassment also is used to its best advantage. Randi recalls one clutched moment in a performance when he made the wrong choice of target, but his onstage volunteer went right ahead and solemnly declared Randi's selection correct. A good magician also is a slick con artist with a charming, beguiling air of innocence. "At *Time* Uri did a cute thing where he said, 'I'm going to cover my eyes,'" continues Randi. "The woman sitting right in front of him was the only one who was really in a position to see whether he had his eyes covered, and he turned to her as he did this and he said, 'Would you help me concentrate by closing your eyes?' Which is great—she was the only one who could catch him. She said, 'Oh, yes.' She was being very serious about the thing. Then he thanked her afterward when he was successful because she helped him concentrate." In reality, maintains Randi, Geller simply peeked.

Randi was chosen to write down a figure Geller was to send him. Making sure Geller could not see the top end of his pencil, the magician moved his hand in several different directions as if he were drawing. Occasionally he would make a mark, eventually producing a complete sketch of a spoked wheel with an eyebrow over it. "Uri bombed out entirely with me," brags Randi, "because he simply hadn't seen any arm movement—at least that's *my* theory." But, adds the magician, the fact that Geller missed with him gets dismissed in the audience's mind. "You don't

remember the number of times your wife is faithful," laughs Randi. "You remember the times she's *unfaithful*."

As with most audiences, Geller's metal-bending is what the editors had come to see. Forks were quickly fetched from the *Time* cafeteria. Some twenty minutes passed as Geller unsuccessfully tried to bend one. "Then, at that point," continues Randi, "I looked at Charles [Reynolds] and gave him a hard stare, and Charles just sort of nodded, because we could see Geller tensing up. We know what the performer looks like at the moment he is going to 'grab the cheesecloth'—the moment he is going to do the trick. There's a moment when the audience isn't going to suspect it. The magician could very casually reach into his pocket and take from it a handkerchief to mop his brow; but in doing so, he may have picked up a billiard ball in the same move. That's his move. He is going to 'grab the cheesecloth.' Most magicians betray themselves very slightly at this crucial moment with just a flicker of tenseness." According to Randi, and later Reynolds, Geller's grab-the-cheesecloth move was accompanied by a shifting forward in his seat and a quick bobbing motion. "At that moment, Geller handed me [Randi] the fork and pressed my hands tightly on it with both his hands. He said, 'Now just hold onto that and tell me if it gets warm.' He immediately turned around, reached down to the table, picked up one of the other forks, made a sharp upward move with it, and put it aside and covered it with paper." Randi says that he definitely spotted Geller's physically bending the fork on his "sharp, upward move."

Then Geller stated, "I can fix watches and clocks. Do you have a clock that's broken?" While someone scurried off to track down a broken clock, Geller shuffled the papers that hid the fork beneath, inconspicuously moving them off to his left along the low table in front of him, getting as much distance between himself and the fork as possible. "We saw him bend it, so we knew very well what was going to happen," confides Randi. "Meanwhile, I'm standing there like a dummy with a fork in my hand."

Geller played with the nonrunning clock for a while, actually taking out the battery cell and licking it to get a better contact, then bending the wire contacts forward to make them tighter, according to Randi. Still, it would not

work. Moving on quickly, he tried to make some wrist-watches move their hands. Randi demonstrates with quick sleight of hand how he thinks Geller pulls out the stem one-handedly and merely moves the watch hands forward, unnoticed by his audience. He then places the watch face down, leaving it for several minutes before coming back to it, careful not to go near the stem the second time, makes a few passes with his hands, and *voilà*, the time has changed. Geller heightens the illusion by walking away from the watch, saying that he does not think it is going to work. The advance in the hands is then noticed by the watch owner, who has to convince Geller that, yes, the hands have indeed moved. "This is the born actor," declares Randi. "This is what makes a good magician. It's just a beautiful routine, a beautiful approach." Whatever else his detractors say about him, all praise the psychic superman for his consummate skill at psychological manipulation, the essence of magic.

Unsuccessful at finding a broken watch to work with, Geller then turned back to Randi, who was still holding onto the fork, and asked if it was getting warm yet. Randi answered that it was, but only from his body temperature. Just then, somebody looked for the other fork on the table, picked it up, and exclaimed how it was bent. Continues Randi, "Geller turned to me and exclaimed, 'Did you see that?' And I said, 'Mr. Geller, I certainly did.' I looked him straight in the eye and I had a big smile on my face. The big smile just dropped off his face and he turned back and went, 'Ahèm.' From then on, he didn't trust me with a thing."

Geller next asked for a key to bend. Charlie Reynolds offered up the brass key to the *Popular Photography* picture room. Again, Geller shuffled the items on the table in front of him, creating distraction, rubbed the key on the table to show that it was flat, had several people hold it while he passed his hands over it, then placed it back on the table, saying that he did not think he could bend it. He asked for another object to bend and someone suggested a beer-can opener—usually a readily available item in the offices of *Time*.

Randi and Reynolds, each from different vantage points, had agreed to keep their eyes fixed on Geller, no matter

what the distraction. They saw Uri rise from his seat, motioning for people in the back of the room to move forward. Randi explains the move, eyes aglow at his discovery: "In standing up, he put the point of the key against the table—I was making wild hand gestures to Charlie, who was making a note at that time and just looked up in time as he started to move—and we both caught Geller bending the tip." Acknowledging their mutual discovery, Randi and Reynolds exchanged broad smiles. Geller chose a woman from the audience, asked her to hold the key tightly in her hand, pressed his hand over hers, then quickly took the key from her, saying it still was not bent. Holding it by the tip, concealing the bent portion, Geller rubbed the large end along the table, demonstrating how the key was still flat, adding, however, that he was beginning to feel his powers surge. (According to Randi, the key already was bent.) Rubbing gently, Geller gradually uncovered the mid-part of the key, revealing a thirty-degree bend. Promising that a metal desk would help it bend more, the psychic dashed out of the room into the hall. Randi and Reynolds were up instantly like hounds to the hunt, trailing Geller into the next room. "He was rubbing the key on the corners of the metal desk," remembers Randi. The key was now bent up to a full ninety degrees. "At that point, Puharich came walking around the corner and he said, 'Oh, I hope you enjoyed all that, Mr. Magician. I suppose you think it's all a trick, don't you, Mr. Magician?'" A chagrined Puharich and Geller left soon after.

The ensuing March 12, 1973, *Time* story on Geller, entitled "The Magician and the Think Tank," ridiculed SRI's attempt to research "a questionable nightclub magician."

But Charlie Reynolds was not through with Geller. Screwing his puckish, bearded face into a grin, Reynolds recalls great pleasure some years back at personally debunking psychic Ted Serios' attempts to project mental images onto film. Reynolds was anxious to do the same with Geller, whose London press clippings heralded "Uri's miracle pictures"—alleged psychic projections onto film.

At Reynolds' instigation, former *Life* photographer Yale Joel shot a session with Geller in New York. Geller vol-

unteered to try to project a picture through a sealed lens cap. As described in Joel's resulting *Popular Photography* article, Geller said he would try to produce the image of an eagle onto the film inside the camera. "Uri raised the Pentax with cap swathed in black tape, the lens practically touching his forehead," reports Joel. "Along about the fifth or sixth exposure, Uri intimated contact with the eagle. 'I can feel it getting through!' he cried as he urged the image through the lens cap." Proceeding with their experiments, Joel and his son, Seth, then attempted to send a drawing telepathically to Geller. The photographer and his son went into an adjoining room, closed the door, and proceeded to make the drawing, which they enclosed in two envelopes. Despite precautions taken to prevent Geller's knowing the drawing, the father-and-son team forgot that they had left Geller alone in the closed room for three to five minutes with the camera and taped lens cap.

Later that same night Seth Joel developed the roll of film. Incredulously, he saw that one of the frames did indeed have an image on it. There was a round dark blob in the center of the picture and a partial image of Geller on the right-hand side, showing him from nose level down to his waist. Seth's father was stunned. But after showing a print of the miraculous shot to several other photographers, a reasonable explanation emerged. Telltale dark bumps on either side of the central dark circle revealed Geller's right hand, apparently holding the lens cap a few inches away from the lens, while he casually snapped a self-portrait. The key to the exposure was the lens itself, an extreme wide-angle, 17 mm "fisheye," which caught an in-focus Geller as well as his fingers holding the lens cap. Had the camera been fitted with a normal 50 mm lens, most of the frame would have been blacked out, with merely a highly suggestive, out-of-focus impingement of light filtering in from the edges. Joel easily duplicated what Geller had done.

While the eager *Popular Photography* debunkers rushed to announce that Geller probably faked his through-the-lens-cap image, they completely ignored Uri's telepathic try. Returning from their three-to-five-minute room exit, the Joels asked the psychic to guess the double-sealed drawing they had made. Reports Joel: "Uri had no trouble in

duplicating the chair that Seth had drawn." This is one understated sentence, acknowledging that Geller had indeed pulled a successful stunt, apparently by means of his psychic abilities. But not a word from either Joel or Reynolds in their debunking expressing even mild puzzlement.

This episode illustrates an important point: advocates on both sides of this highly charged issue are willing to marshal emotional half-truths in defense of their staunchly held preconceptions. One reason why magicians like Randi and Reynolds react so strongly to Geller is that professional conjurers abide by an unwritten code of ethics that demands exposure of any conjurer who tries to pass himself off as a legitimate psychic. They are convinced the Israeli is a fake in everything that he does, and his performances strongly breach their moral code; thus, the outrage—and the exaggerated sadness—that he does not play the game according to their rules.

Randi's home in New Jersey reflects his magus personality. Ring the bell and military music booms out of a Peruvian mask on the door. Twin macaws squawk their raucous greetings. The front door opens opposite from the side the knob is on, warning the visitor that he is entering a world of illusion and misdirection. Mummy cases and other strange tools of his trade lie scattered about. Comedienne Lily Tomlin answers Randi's prerecorded telephone message in her snuffling Burbank telephone operator's voice. Backward run his clocks until reels the mind. This parody of reality is a fitting abode for a conjurer. On his video tape recorder, Randi collects all of Geller's television appearances, running them over and over like a football buff replays Super Bowl touchdowns, scouting the suspected "cheesecloth moves" in Geller's act.

Reviewing Barbara Walters' "Not for Women Only" program, Randi claims that the spoon Geller broke there had been tampered with prior to the show. The prop man told Randi that Geller had "all the opportunity in the world to play around with it" before going on. So, Randi's all-purpose explanation for all spoon-bending and breaking fits: Geller simply bent the spoon back and forth several times until it was ready to break on camera with just a slight additional force.

Randi also thinks that Geller uses his large mod belt buckle as a vise to help him bend keys and other objects. A deft, practiced move to his waist is all it takes to accomplish this trick, believes Randi. The hole in the head of one house key can be used as a quick vise, also. Just insert the pointed end of another key into the hole, press hard, and the inserted key has a bend in it. Another standard stunt, claims Randi, is to work with five or six large nails that have been wrapped with a rubber band or piece of adhesive tape. In almost every case, Geller exclaims over the fact that they are bound, feigning surprise and asking, "Who put this tape around them?" According to Randi, this simply sets up the audience's psychological misdirection. "What has happened backstage, in my humble estimation," says Randi, "is that he has merely switched one stack of nails for another stack of nails, one nail of which is already bent. But in a stack of nails tied together with tape, you can't tell."

Geller worked a variation of the bent-nail trick on "The Mike Douglas Show," according to Randi's account. Geller handed a straight nail to Douglas (on his right) and a second nail to actor Tony Curtis (on his left). He picked up a third nail without showing it, which he kept in his left hand. That one, charges Randi, was already bent. Douglas showed the audience his straight nail, then handed it to Geller, who took it in his right hand. He turned to Curtis, who laid down his nail. Geller then asked the actor to hold onto the top end of each of the remaining two nails while he, Geller, stroked the middle portions, still concealing the bottom portions. After a while, Curtis was asked to put aside the "good" nail in his left hand, followed by more rubbing on the remaining nail, the one Geller never showed. Eventually he asked Curtis if he saw the nail beginning to bend. Yes, he did. Then Geller slowly lowered his fingers along the shank of the nail, revealing a slightly bent nail—which appeared to continue to bend—much to the amazement of Curtis, Douglas, and the audience. Geller said that it was still bending and placed it against a tray so the audience could see the hump in it. Applause. Randi then duplicates the performance for me. Even knowing how it is done and watching for it, I cannot catch the sleight of hand that produces the bent nail. The effect of

continuous bending comes from slowly moving a finger down the bent shank. Geller's psychic image, like a Polaroid snapshot in reverse, begins to disappear slowly before my eyes.

A week before Geller's appearance on "The Johnny Carson Show," the host—an ex-schoolboy magician—called Randi, seeking advice to prevent Geller from pulling tricks during his performance. Don't let him near the props, warned Randi. So the sealed envelope containing a picture for Geller to guess was locked inside the producer's briefcase. He kept it with him at all times, locked, never taking it near the set until showtime, according to Randi. On the show, Carson asked Geller several times whether he wanted to try to guess what was inside the envelope. "No, I don't feel for that," was the psychic's pallid reply. Geller did try ten-can roulette, a feat successfully accomplished at SRI. The psychic chose one can—empty. He chose another—full. An embarrassing bust.

One method of doing this trick is to jar the table on which the cans are sitting. The filled can, because of inertia, will not jiggle as much as the others. Carson told Randi that during an off-camera commercial break, Geller jarred the table with his knee and Carson asked him to stop. Carson also reported that he stopped Geller from blowing on the cans, again to prevent him from jiggling them. The verdict: Geller bombed on Carson's show. "The Amazing Randi" maintains that it was because of the strict controls placed on the psychic.

Randi adds that jiggling the table is just one way of doing the can trick. Minute temperature differences reveal cans filled with cold (or hot) water. Cans packed tight with nails and screws give themselves away by tiny bumps that poke out of their sides. Randi maintains that there are other ways as well to pick out a full can. Adhering to the traditions of magic, he requests that those tricks be kept secret.

The magician says that he truly believes that Geller is one of the cleverest men around and only wishes that he had gone legitimate. "I tell you one thing, if he had come to the United States of America as a mentalist or some such thing, and had done the theater circuit and the

college circuit, all of us guys [magicians], me at the head of the line, would have been down there to see him. He'd be a shot in the arm for the business. There is nothing I like better than good, strong, healthy competition. If Geller had come and had done well and was a bright new face on the scene and everything like that, I would be out at the airport to put a wreath around his neck." Instead, Randi would like to ring him with a vaudeville hook.

Another in the group of avid Geller debunkers is the respected *Scientific American* columnist, Martin Gardner, a student of philosophy in the strictest sense of the rationalist tradition, by nature a devout zetetic. He also is a magician, a specialist with cards that he continually shuffles and cuts while revealing the arcane subtleties of magic. The circuit between Gardner, Randi, Reynolds, *Time's* senior editor Leon Jaroff, and other debunkers—mostly magicians here and abroad—rings continuously with the latest Geller goings-on, trading news clippings on Geller as kids trade baseball cards. Gardner's book, *Fads and Fallacies in the Name of Science*, which knocks cults that range from Wilhelm Reich's orgone energy to Atlantis, flying saucers, Velikovsky, Scientology, Bridey Murphy, and dousing, is the group's standard reference tool. The silver-haired gentleman is committed to the belief that all these fringe areas—including psychic research—are nothing but hokum, a means of duping an uninformed public with pseudo-mystical incantations. He, like the others, feels duty-bound to set public perceptions straight, so they have tried to establish a vigilante committee to expose psychics and faith healers, but to date have not received the foundation funding they have sought. One whimsical suggestion offered up as a name for this self-appointed committee is "Sanity in Research Investigations," the initials of which, snickers one debunker, are "SRI."

For Martin Gardner and the others in his magic circle, the issue of Uri Geller is a deeply moral one. Part of their legitimate concern is with fraudulent faith healers. Gardner reasons that acceptance of Geller's abilities tends to verify faith healing and thus creates the danger of duping naïve believers in potential life or death situations. But the group has a broader, more passionate concern with the general "rise of occultism" in this country. In particular,

they cite the historical precedent of Weimar Germany, a period during which the occult did indeed form a fashionable and widespread segment of the *zeitgeist*. Gardner: "It happened before. Belief in occultism provides a climate for the rise of a demagogue. I think this is precisely what happened in Nazi Germany before the rise of Hitler." He fervently believes it can happen again.

But such legitimate concerns are turned into blindly prejudiced condemnations by others in the debunker clique. The author of *Time's* widely read cover story on the current psychic rage declared in private: "SRI should be destroyed," not just because of its experiments with Uri Geller, but because of its willingness to undertake *any* investigations into the paranormal. "You know, that's the way fascism began," he confided.

Separating legitimate criticisms of Geller's conjuring techniques from amongst the barrage of debunkers' moral outrage is just as difficult as divining the truth of the unending believers' anecdotes of Geller's psychic prowess. Regrettably, both sides argue on the basis of strong personal bias. For example, one of the most influential of the debunkers proclaimed vehemently: "Uri Geller can't be true. If anything he does is real, it destroys everything I believe in; therefore, he can't be true." The irrationalism of this point of view matches the irrationalism of the unquestioning believer, who accepts at face value every Geller-bent fork as testimony to his paranormal powers. Both viewpoints are based on emotion, totally outside the bounds of logic, but terribly human.

The eventual conclusion reached by many Geller aficionados—SRI scientists included—is that the young performer will resort to trickery in a public demonstration or whenever else he can. "We have a feeling," says Russell Targ, "that people with psychic ability will cheat if you give them the chance, just the way anybody else will cheat if you give them a chance." Targ's favorite example is tournament bridge players. If they can sneak a peek to increase the odds on a delicate finesse, they will, he asserts. Even Edgar Mitchell suspects that Geller might "augment" every now and then; but he steadfastly defends his and SRI's conclusion that Geller does indeed work wonders.

If one were to accept as valid the magicians' arguments

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that Geller may cheat on some or all of his public displays, what about his results obtained under so-called controlled conditions at SRI? "I don't believe they were strict scientific conditions at all," grumbles Randi, "because I just don't believe this kind of thing can happen if there are strict conditions." There's the problem. The debunkers, deep down, hesitate to admit that paranormal abilities even are possible. Yet, each, when pushed, hedges his position to ensure that he is not taken for a person of blinding prejudice. Their positions range from solid, parapsychological agnosticism to outright atheism. Their marshaling of countless historical hoaxes, of mediums defrocked, and of supposed psychics uncovered is persuasive, particularly in light of the numerous magical exposés of Geller's techniques. But by the debunkers' standards of belief—and hence, "logic"—circumstances will never be sufficiently controlled to prevent Geller or any other psychic from cheating, or to keep the experimenters themselves free from tainted self-delusion.

... To be caught up in an awareness of forms is to become increasingly engrossed in the details that make up these forms. . . . Detail after detail accumulates; reality made unreal is supersaturated and intensified documentary realism. All of these—realism, surrealism and the documentary—depend upon the ability to reinforce a pattern of thought (one that post-Cartesian man is particularly susceptible to) which holds that whatever one sees clearly and distinctly must be true and, therefore, must also be real. When this inclination to accept a universe of details as real is merged with art that deliberately manufactures artifice, reality and pseudo reality become equivalent.

—Bill Kinser, Neil Kleinman,
from *The Dream That Was No More a Dream*

Whoever says everything is true is a fool; whoever says all is untrue is a liar.

—Sufi teaching

DOES HE, OR DOESN'T HE?

THE CONTROVERSY OVER URI GELLER PEAKED ON OCTOBER 18, 1974, when Britain's most prestigious scientific journal, *Nature*, published a lengthy description of SRI's experiments. Originally five thousand words long, Puthoff's and Targ's paper was one of the most closely scrutinized pieces of work ever to exit the institute. A special "blue ribbon" committee had been named to oversee the work coming out of the psychic laboratories. Though they witnessed some paranormal demonstrations, the committee's chief purpose was to edit the resulting paper—and edit they did.

"It was picked to pieces," recalls one knowledgeable participant. Three outside psychologists—David Galin and Robert Ornstein of Langley Porter Neuropsychiatric Institute, and the University of California's Charles Tart—were brought in as consultants in an attempt to dress up the physicists' lack of psychological test protocol. After months of argument and red-penciling, the paper was mailed to *Nature*.

Three and one half months later, *Nature* returned the paper, requesting that it be cut, making the surprising suggestion that the SRI team just report on Uri Geller and nothing else, since he was the controversial psychic. No way. Puthoff and Targ wanted additional results aired. "The Geller work we feel least likely to publish by itself," Targ admitted, revealing even his shadowy doubts about the young Israeli's loudly trumpeted claims.

Compounding *Nature's* puzzlement over whether to publish Puthoff's and Targ's effort was the arrival of another psi paper, one by Dr. Jay Levy, describing his work with

"psychic" gerbils. It was about this time that Levy's co-workers at the J. B. Rhine Laboratories in North Carolina discovered that he had deliberately falsified those results, putting the *Nature* editors into even more of a quandary over what to do with the SRI work. In one referee's damning opinion: "I don't think they [Puthoff and Targ] could get the paper published in a parapsychological journal." The studies, he judged, were "incomplete" and "unbelievably vague." Why wasn't the die that Geller was to predict shaken by some mechanical randomizer? Why wasn't the die changed? (It was, according to the experimenters, but they did not include such a statement in their paper.) Who did the shaking of the die? Who opened the box? "I wouldn't let a sophomore get away with it," declares this judge, critical of this lack of specifics in the write-up. "It's even ten years behind parapsychology," he moans.

Finally, the editors of *Nature* decided to publish the paper, prefacing it with a lengthy editorial explanation that, although the referees had been divided in their opinions, the decision to publish this "high-risk" paper was made in order to "stimulate and advance the controversy rather than keep it out of circulation for a further period." Then came *Nature's* most important caveat: "Publishing in a scientific journal is not a process of receiving a seal of approval from the establishment; rather, it is the serving of notice on the community that there is something worthy of their attention and scrutiny. And this scrutiny is bound to take the form of a desire amongst some to repeat the experiments with even more caution."

The final paper included results on Uri Geller and one other psychic studied at SRI named Pat Price, plus a description of an electroencephalograph (EEG) experiment that claimed to correlate changes in brain state with the transfer of telepathic information.

Of all the experiments run with Uri Geller, the only ones chosen to be included in SRI's report to *Nature* were his drawing and dice-guessing attempts. Puthoff and Targ described how two unnamed SRI judges "not otherwise associated with the research" evaluated Geller's sketches by matching them with the thirteen target drawings. Without knowing which Geller sketch was made in response to

which target, the judges correctly matched up each of Geller's ten responses with the target he was trying to guess at the time (recall that he "passed" on three of the targets). The experimenters then concluded that Geller correctly perceived ten of the thirteen targets—which is not quite the case—saying that the odds for such a coincidence are approximately one in ten trillion. Puthoff and Targ state flatly: "The quality of match between target and response in certain cases, together with the overall probability of matching obtained by the judges, constitutes strong evidence for the existence of a potentially useful information channel"—that is, telepathy, or clairvoyance.

The experimenters also included negative findings in their paper. Geller was unable to do better than chance when given targets prepared by a team of highly skeptical SRI psychologists. One hundred target pictures were drawn by an SRI artist, screened for similarity by the experimenters, then sealed by other SRI personnel in double envelopes with black cardboard. There was no way to see through the envelopes, even using the magician's trick of carbon tetrachloride. The targets were randomly divided into groups of twenty. Unlike their own drawing experiments, in which at least one of them knew what the target was, this time neither Puthoff nor Targ was aware what the drawings were for each test. Neither did the fabled psychic know. For three days he tried, passing, passing, passing continuously. He did turn in "about twelve recognizable drawings that he felt were associated with the entire pool," report Puthoff and Targ. The psychic superman, who allegedly had scored success after success with the Puthoff/Targ drawings, said that he felt confused by such a large pool of targets, suggesting that he received multitudinous "crosstalk" from so many drawings. Privately, Puthoff and Targ draw the highly speculative conclusion "that eliminating a person knowledgeable of the target degrades the quality of the information channel." That statement is grossly illogical. The men suggest that the only difference between the two experimental protocols is the lack of target knowledge by at least one experimenter. Not so. Target preparation and security were different as well—and could be the significant change. After all, Geller succeeded only with the drawings, which, in effect,

were "made public" either by being taped to the wall outside his enclosure or to the blackboard in the office where Russ Targ and Jean Mayo remained during the third test—all occasions when the specific targets were known by others.

The inclusion of this negative finding represents just the tip of a boiling controversy that jostled the innards of SRI during the Geller experiments, in which physicists Puthoff and Targ found themselves squared off against SRI psychologists. The two experimenters refused to have active participation of psychologists in all but their EEG experiments, for which they received withering criticism. There was a battle of memoranda, with some SRI psychologists angry enough to pen their objections directly to SRI president Charles Anderson. "They [Puthoff and Targ] got him [Anderson] wrapped around their little finger," complained one dissenter. Nevertheless, Puthoff and Targ did include this negative Geller finding, an experiment conceived by the psychologist skeptics at SRI who consider Geller a complete fraud.

But what Gellerites the world over were hotly anticipating was Stanford Research Institute's confirmation of their favorite psychic's mind-wrenching powers of psychokinesis. They found scant satisfaction in the SRI report. After the heralded publicity, worldwide demonstrations, and highly touted experiments, all the SRI team could scrape up to report positively about Uri Geller boiled down to ten drawings out of one hundred thirteen, and a dice experiment. In effect, the SRI experimenters damn the Israeli wizard with faint praise, failing as they do to report on any other of the highly touted metal-bending and psychokinetic "Geller effects." In fact, Puthoff and Targ included an outright disclaimer in their *Nature* paper: "Although metal-bending by Geller has been observed in our laboratory, we have not been able to combine such observations with adequately controlled experiments to obtain data sufficient to support the paranormal hypothesis."

Puthoff and Targ slough off questions about whether they ever caught Geller cheating. Their public answer is no, they did not. But Russell Targ admitted privately to a government scientist that the SRI team did indeed catch Geller in the act during an attempted spoon-bending. Ac-

cording to the scientist, the SRI film of the experiment clearly shows a frustrated Geller, thinking he would not be seen, jamming the spoon handle up a water faucet and bending it by force. "I think he [Uri] can do what we say he did," cautions Targ, leaving unsaid his implied skepticism about Geller's metal-bending and other psychokinetic abilities. That brings the psychic superman back to earth with a clunk.

The SRI experimenters react bitterly against accusations that they are not sufficiently sophisticated to guard against a magician's fraud in their experiments. "These people treat us as though we're very naïve," states an angry Russ Targ. "I got into psychic research because I used to do magic on the stage. I'm very familiar with thumb writers, card tricks, and the whole lore of legerdemain and mental acts." While in college Targ did have his own mentalist act. "There is a whole library of magic books that I've had since I was a child—and my library goes back to 1948—when I was doing card magic and stage magic. So when people tell me maybe he [Geller] was doing thumb writing or maybe he wrote the thing after he wrote yours is really an insult, really ridiculous. . . ." Targ spent half a year in 1955 with the British parapsychological foundation, "canvassing English psychics to see the extent to which they were on the up and up."

He and Puthoff also reveal a closely guarded secret: "We have magicians introduced into the experiments without Geller knowing it," says Puthoff. "Some of the people we told him were scientists were really magicians." Bart Cox, head of the division that conducted the SRI research, confirms that two unnamed magicians were brought in to follow Geller's actions—but only for two or three days of experiments. The magicians SRI brought in also are not active in the profession; one of them serves as a consultant to SRI on entirely other matters. How reliable their judgments are remains cloudy. However, Cox says that one of the world's top professionals, Melbourne Christopher, has been in telephone consultation with SRI. Cox hopes to have him serve as a consultant to the continuing experiments.

"We've had magicians go over thirty thousand feet of movie film, frame by frame, hundreds of hours of video-

tape, in stop motion and slow motion, hunting for tricks. The final series of experiments that we've come up with that we consider publishable are those experiments that, to the best of our knowledge and to the best of the knowledge of the magicians we've consulted with, could not have been done by trickery," insists Puthoff.

Targ discounts another frequent criticism—that he could not see well enough even if he wanted to catch Geller cheating. Without glasses, the SRI researcher is indeed legally blind. With the aid of thick corrective lenses, his disability—an inability to resolve images—does allow him to drive (a motorcycle, in fact). Fine-print reading material is more difficult for him, and he has to hold it a few inches away from his eyes. However, he stiffly defends his ability to spot any attempted sleights of hand or other chicanery by the psychics he studies, Geller included.

"Our position is that a magician can do anything," continues Targ. "A magician is omnipotent if you let him do it [the trick] his way. If you tell me you'd like to see something [magical], I can say, 'Well, come to dinner tomorrow night and you'll see it.' The chance is very likely that you won't catch me doing whatever it is you want to see. But it's very different from saying, 'I'd like to see something, I'll have it set up in my laboratory, show up tomorrow and do it.' It's a completely different thing." Even Randi, for all his debunker's rhetoric, is forced to admit after lengthy discussion that Geller's drawings only could have been accomplished by collusion—or psychic sensing. In other words, he is forced to rule out what he suspects is Geller's normal mode of viewing hidden drawings—merely stealing a peek.

But did those insulated walls in the drawing experiment room protect against every possibility of getting clandestine clues in to Geller? High-class magic shops do stock a pea-sized radio receiver that can be concealed inside the ear. Of greater interest is the fact that Andrija Puharich holds several patents for a miniature radio receiver implanted in a tooth. One source friendly with the doctor claims that his clever device (granted U.S. Patent 2-995-633, issued August 8, 1961) was created specifically for use by the Central Intelligence Agency. The receiver works as follows: radio signals received by a gold filling in the tooth

are converted by a tiny rectifier to electrical signals at audio frequencies that are imparted directly to the nerve endings in the live tooth and then to the brain. An amplifier for the signals can be mounted inside a false tooth, as a later Puharich patent describes (U.S. Patent 3-156-787), working only when the tongue is pressed against the amplifier terminal. The only way to check Geller for a tooth radio would be to X-ray him completely (a receiver could be surgically implanted anywhere on his body), a security precaution the psychic has steadfastly refused to allow. Could Geller then have had such a receiver, thus enabling him to receive coded clues describing the targets he was to "see" telepathically?

Yes, argues Dr. Joseph Hanlon, an editor of the British publication called *New Scientist*. Hanlon quotes an expert in shielded room design, Robert King, of Imperial College in London: "Ordinary radio signals are indeed shielded out by the EEG enclosures. But at microwave frequencies around ten billion cycles per second [ten gigaHertz], the signals would easily penetrate the room, traveling along the metal air-conditioning ducts. At higher frequencies, the signals could leak through miniscule cracks under the steel door, transmitted by a device no bigger than a pack of cigarettes."

Prior to Hanlon's critique, the SRI experimenters told me that they were well aware of the hidden receiver possibility. "We know Andrija is an expert in miniature electronics," acknowledged Targ, well before the issue was raised publicly. That is one reason why Geller's mentor deliberately was excluded from SRI during the experiments.

"Puharich has never been at SRI while Geller was here," asserts Puthoff, adding that Uri's girl friend Hannah also was excluded from the experiment areas. But Shipi Strang, Geller's ever-present sidekick, was allowed to remain in the vicinity of the experiments while they were being conducted, even to the point of being locked inside shielded rooms with Geller during some tests. "Part of our secret design was to see if Geller did better work when Shipi was around," explains Puthoff, oblivious to the irony in his statement. "We wanted to know if Shipi worked as a psychotronic amplifier [for Geller]." A reader of the *Na-*

ture paper would never know that persons other than Puthoff and Targ were permitted access to the experiment areas. During some of Geller's drawing tests, for example, Shipi remained directly outside the room where Harold Puthoff and Jean Mayo prepared the targets and taped them to the outside wall of Geller's enclosure. "Shipi was just seated at a desk by himself," says Puthoff, admitting that Uri's long-time comrade was not even watched. When Geller was inside the second-floor Faraday cage down the hall from the computer-generated drawings, Shipi was inside with him, guarded by Puthoff. Where, then, was Hannah? And why were several "computer personnel" allowed to view the target during these tests?

The SRI experimenters defend themselves against such criticisms by resorting to exaggerated literalness and insistence that all the necessary precautions were taken. "It's like asking if we shut the door," protests Puthoff. Their reticence to reveal the extensive security precautions they claim were taken leaves the SRI team vulnerable to the charge that they naïvely disregarded the possibility of sophisticated hoaxing by Geller. Stung by this accusation, Puthoff and Targ counter that they kept secret their elaborate precautions for fear of antagonizing Geller and the other sensitives with whom they work. Although they have not publicly reported their safeguards, Puthoff claims that "we started [electronically] debugging the experiment rooms even before Geller showed up. We even took apart the crawl spaces above the experiment rooms before, during, and after the experiments. All the phones were checked daily to see if they had been bugged, and we have the best bug detector in the world at SRI." No bug was ever found, he says. Security personnel manned the SRI rooftops during every Geller experiment, continues Puthoff. Their job was to watch for the slightest sign of confederates attempting to get target information in to the psychic. "We don't care if Geller has a mouthful of receivers and transmitters all over the place," adds Puthoff, stiffly insisting that the experiment team guarded against utilization of such sophisticated deception.

Yet the suspicions remain. For example: a cable conduit, about two to three inches in diameter, carried the intercom and EEG wiring from the room where Geller sat

outside the steel wall to the instrumentation in the adjoining room. This hole was sealed with cotton batting and a small cover at its exit, which was near the floor about six feet away from where target pictures were taped, according to Puthoff. SRI psychologist Charles Rebert, who participated in some of the experiments, charges that after one test—the one in which Geller quickly guessed the bunch of grapes and drew a perfect duplicate—some cotton wadding was found pulled out of Geller's side of the conduit. This would have allowed him the possibility of either hearing any discussion of the target, extending a radio antenna through the conduit, or possibly using some concealed fiber optics* to snake through the tube and sneak a direct look at the target picture.

Understandably, Puthoff reacts angrily to Rebert's accusation: "That's absolute bullshit. We were worried about Uri's having fiber optics available to see around corners, so we made sure the hole was covered. We spent hours shouting between ourselves through that hole—you could barely hear a thing—and seeing if someone could stick something through it. We had to assume that Geller and his associates came loaded for bear, so we prepared for them."

As with so many elements in this story, the matter rests on whom one believes. Rebert led the in-house fight against the psychic experimenters and would like to discredit them as much as possible. Puthoff and Targ naturally want their complex experiments shown in the best possible light. The truth of this specific charge about the cable conduit probably never will be resolved, but it illustrates the complexity of making a clearcut judgment about Geller and the experiments at SRI.

Safeguards against possible collusion between one of them and Geller were even instituted, according to the experimenters. Says Puthoff: "I am not in collusion with Geller because I do experiments in which Russell doesn't know the answer and vice versa. He's had a chance to check on me, and I've had a chance to check on him." Puthoff even suggests a level of suspicion that no one else—not even a debunking magician—has imagined. "You

* Fiber optic devices are flexible tubes of either glass or plastic fibers that conduct light and thus can be used to see around corners.

know what our real, paranoid, initial opinion was? We were already working with Swann and we thought maybe Geller . . . was a clever magician trained specifically to fool psychic researchers and was being sent by somebody to see if they could crack our protocol. . . . If the name of the game is to discredit this type of research in America, then anything that discredits the work—including a deliberate plant using hidden radios—serves the same goal."

One SRI staffer claims that a classified government report warns that the Soviet Union maintains a specific goal of discrediting psychic research because of its potential strategic use. This same staffer, who insists on anonymity, strongly insinuates that the barrage of criticism faced by SRI's experimenters possibly is the result of a conspiracy sired by the Soviet Union. "We even caught other countries' intelligence agents prowling through here," asserts Puthoff.

Unless clearcut evidence can be shown to support such charges, the smokescreen of national security has no reason to be invoked as a means of obscuring critiques of SRI's experiments, a judgment that the recent history of this country should make painfully clear. But, again, the example illustrates the lengths to which the defenders of SRI's work will go to justify the institute's conclusions about psychic phenomena.

Bonnar Cox, the division chief who oversees Puthoff's and Targ's work, scoffs at the conspiracy idea. "I've never heard of such a thing." Patiently hearing out the latest critic's questionings, Cox answers confidently, "I trust in the people [Puthoff and Targ]."

The question of deliberate hoaxing or possible self-deception is a serious one in any scientific research, not just in paranormal investigations. The spurious Piltown Man in England and the case of the midwife toad are famous examples of serious scientists being duped. A respected cancer researcher at the prestigious Sloan-Kettering Institute recently was revealed to have falsified his experiments by painting mice to make it appear as if his remarkable skin graft procedure were successful.

But the number of instances of hoaxes being perpetrated in psychic research is far more numerous. In 1974, Dr. Jay

Levy, the twenty-six-year-old heir apparent to J. B. Rhine's famous Institute for Parapsychology, was discovered to have falsified his experiments. "This whole thing serves as a reminder that you can't always take research findings at face value," commented Dr. Robert Morris, president of the Parapsychology Association. Levy's mentor, Dr. Rhine, sadly added, "The idea of putting faith in the personal honesty of a research worker is old-fashioned."

Who's fooling whom?

Plain and simple, Uri Geller is a self-confessed magician. He started out as one. And he remains one today. Whether he is something more than that is a question totally clouded by his beginnings.

Uri's girl friend, Hannah Strang, who traveled with him from the very beginning—through Israel, Europe, then to America and SRI—later left him for reasons unknown, although some suggest old-fashioned jealousy. In *Ha'Olam Hazei*, the weekly Israeli paper, Geller's ex-girl friend tells a far different, perhaps vindictive, account of the evolution of the showman's career, assertions confirmed by others who knew Geller in Israel. Depressed because of his failure to succeed in the military world of his well-known father, Geller—still recuperating from his war wounds—encountered the resourceful fourteen-year-old, Shipi Strang, and confided to his new friend that he had been fascinated by a book about magic. Quietly, the two of them began practicing some of the tricks described in the book. Geller was then twenty-one.

Uri, Shipi, and occasionally Hannah began performing their fledgling magic act at student parties, charging about ten dollars a night. According to Hannah's account, either Shipi or she would act as an accomplice in the audience, flashing covert signs to the onstage Geller. While his reputation grew as an entertaining performer of tricks, Geller, more and more, began to wrap himself inside the mysterious cloak of psychic powers, claiming that all his stunts were accomplished by the paranormal, that he was an authentic psychic superman. But even then there were debunkers.

One afternoon Geller arrived with Hannah at the Misha-

mar Ha'Emek kibbutz for a performance and overnight stay. The cultural secretary of the kibbutz, skeptical of Geller's well-publicized claims, had prepared a trap. When Geller entered the room where he was to perform that evening, the cultural secretary apologized for the bad lighting, pointed to a broken light bulb above his head, and explained that it had burned out just a half hour prior to Geller's arrival.

Geller turned to Hannah and told her that he had put out the lights with the force of his mind. The budding psychic had blundered.

The secretary told him that the light bulb had broken the day before. There is no record of Geller's reaction to this accusation, which caught him in what has become his standard ploy—to take advantage of every untoward incident, however small, as a sign of his alleged powers.

Even though some who witnessed his early shows in Israel already were tripping him up, Geller decided to break into the big time, so he signed up with impresario Baruch Cotani. One part of the agreement was that Shipi—who had been introduced to Cotani as Geller's kid brother—always be allowed a first- or second-row-center seat at all of Geller's performances. Cotani later found out why. He caught Shipi sending signals to his onstage "big brother." The next night Hannah sat alongside Shipi, presumably taking up the signals where he left off. The split with Cotani came when Geller demanded more money, above and beyond their agreed-upon contract, and he signed on with a new manager, Mikki Peled.

The publicity Geller was accruing for himself began to draw increasing fire from the skeptics. One was Joseph Allon, director of the government computer center and an accomplished amateur magician. Friends brought news clippings of Geller's achievements to Allon, who provided explanations of how trickery might achieve the same effects. Spurred by these glowing accounts, Allon decided to challenge what he thought was Geller's obvious fakery, thinking it would take only a few days and one or two newspaper explanations to clear the air. It turned out to be a far more difficult job than Allon had anticipated.

In the summer of 1970, Allon, his wife, and a group of

friends went to see Geller's act at the Jerusalem YMCA auditorium. The excited entourage of skeptics made sure to get front-row seats. This was the first time Allon actually had seen Geller work. About five minutes before curtain time, Allon pulled out an army post exchange card and sat casually holding it in his hand in plain view. As the lights were dimming, he handed the card to his wife, who placed it in her purse. During Geller's mentalist act, Allon's wife was asked to stand. Then, with his usual theatrics, Geller announced that he "saw" an army PX card in her handbag. At that, Allon jumped to his feet, interrupted the performance, and explained how he thought Geller had spotted the card from the auditorium wings before the show. The amateur magician challenged Geller to a conjuring duel, then and there, declaring that he could do everything that Geller could do—but by magic tricks, the same tricks, he said, that the alleged psychic used. Allon asked to come onstage to prove his accusations. The audience grew hostile, annoyed at having their performance interrupted. Geller calmed matters by agreeing to meet with Allon, but after the show. However, when the performance was over, Geller quickly disappeared, leaving Allon to face an angry crowd that demanded he prove his accusations. On the spot, he duplicated some of the routine Geller had just gone through. Instead of winning the crowd to his side, Allon "was shocked" by their reaction.

"So, you're also psychic," they shouted. "'You're just claiming you're doing it by tricks to discredit Uri. You are just jealous of him.'" Geller, even in his absence, still had the audience in his pocket, more willing to believe his stage story than Allon's demonstrations. What Allon had seen as merely a one-night exposé turned into a lengthy battle of persuasion. The problem, says Allon, was not so much with Geller as with the public's unquenchable need to believe in a psychic superman. The debunker's problems had only begun.

Allon persevered, training a friend, Danny Zehavi, to perform the same variety of mystifying tricks that Geller worked onstage. Next, he convinced psychology professor Sol Kugelmass of Hebrew University to convene a meeting of academicians to witness an Allon/Zehavi unexpurgated version of the Geller routine, complete with all the gestures

and psychic spiel. As Zehavi went through the act, Allon stood to one side, explaining in convincing detail how he thought each trick was accomplished. Word of this debunking session spread quickly. A few days afterward, Dan Halperin, of the Israel Broadcasting Service (Kol Israel), phoned Allon and asked if he would pit himself against the psychic on a prime-time radio news program. Predictably, Geller was reluctant about doing the show (called "This Day"), but finally agreed on the condition that he be in a different studio from Allon. Everything was set. The day of the broadcast, scheduled to air October 4, 1970, at seven P.M., found Halperin and Allon stationed in the Jerusalem studio, but Geller was nowhere in sight. He did arrive, twenty minutes late, in shorts and an open shirt. The broadcast was as disheveled as Geller himself. He stammered, contradicted himself, and refused to work any of his tricks, a far cry from his later, more self-assured counterattacks against critics. Flustered, Geller declined to guess at what number Halperin was thinking, saying, "I can't, I only have shorts on, I haven't prepared myself. . . ."

"What?" countered Halperin. "You have to prepare your clothing for telepathy?"

Answering Halperin on another question, Geller promised to sue anyone who called him a fraud. Allon promptly did just that, challenging the psychic to sue. Geller backed down, muttering vaguely about first having to seek counsel. He never did sue. Allon even challenged Geller's widely touted blind-driving skill, offering to give thirty thousand dollars to the "Phantom Fund" (a government fund to raise money for Phantom jet bombers) if he could not duplicate the stunt. The debunker claims that Geller either lifts the corner of the blindfold over his left eye with a well-concealed finger as he hunches over the steering wheel, or he folds the blindfold a special way, making it easy to peek through a single layer. When Geller performs the trick, he always insists that his passengers concentrate their eyes straight ahead on the oncoming traffic "to help him." He generally tries the trick at night, which provides even more concealment against discovery. Allon duplicated the driving stunt in daylight, convincing some of Geller's staunchest supporters, who were along for the ride. "The

only difference," he says, "is that they were more scared when they came with me." Allon used both the finger-lift and the secret fold techniques to fool his riders, just two of several blind-driving techniques that Geller could have used.

Aside from bending spoons and rings by pure physical manipulation, magicians also suspect Geller of using special chemicals to work his wonders. Highly corrosive salts of mercury—violently poisonous if inhaled or swallowed—can be used to prepare items for future breaking. The chemical causes intergranular corrosion, etching its way through the grain structure of the metal, leaving it spongy and ready for instant breakage. Whether Geller would take the risk of using such a poisonous substance remains an open question. Metallurgists suggest another possible trick procedure using the peculiar metal known as gallium. At ordinary room temperature, it is a solid lump of silvery metal and looks like pure mercury. But raise its temperature slightly with the warmth of a human hand and it melts, making it ideally suited as a solder on a pre-broken spoon joint. Simply polish it up and the spoon looks whole. A few seconds of finger rubbing and the gallium slowly melts, allowing the prepared joint to bend or break apart like taffy.

SRI's Puthoff and Targ received a report from Scandinavia informing them that traces of indium had been found on the severed end of a stainless steel spoon Geller had broken during a performance, further fueling speculation about prepared objects. Indium, like gallium, can be used as a solder, though it has a higher melting point. The doubts have prompted SRI to order metallurgical examination on the broken cutlery Geller left there in his wake. Those results have yet to be announced. It would seem foolish for Geller to use such an easily traceable chemical like mercuric chloride, gallium, or indium in his tricks, unless he felt totally confident that he could substitute the "clean" item for the chemically prepared one after doing each and every trick. Some even suggest that Uri uses miniature lasers tucked away in his belt. Nonsense. The laser needed to accomplish a metal-breaking feat would be as big as Geller himself. Physical manipulation out of sight of the audience is a far more likely explanation.

Geller's grandiose claims about aiding Israeli intelligence, including a face-to-face meeting with then chief of intelligence Aharon Yariv, are also questionable. Yariv flatly denies ever having met with the performer: "I didn't meet him. I didn't consult with him. The whole thing is one big bluff," says the former minister of intelligence. If Geller did help predict the impending Egyptian invasion, it is doubtful that Yariv would confirm it—or even have allowed Geller out of the country. But from the sound of his voice, Yariv's denial rings true.

Though Geller publicly disclaims it, his abilities were studied by a Tel Aviv University psychologist, Dr. Ariel Merari. The psychic was persuaded to submit to investigation after Merari offered to persuade Joseph Allon and other debunkers to hold their fire until the investigation was completed. Merari also enhanced his offer by promising not to publish the results if they were negative. Thirdly, Israeli intelligence, says Merari, was "interested" in the study, but did not "actively participate in the investigation." On those terms, Geller met with the Tel Aviv psychologist and his associates on three different occasions, and he was tested primarily on number guessing and predicting which side of a rolled die would come up. "We gave him the freedom to do it exactly as he wanted," explains Merari, "except that there was an investigator in the room with him, the sessions were tape-recorded, and every movement was recorded simultaneously on three video cameras." The results were never published, they were so bad. "Absolutely negative," reports Merari. "He scored, in fact, consistently lower than chance." Geller broke off after the third session and adamantly refused to cooperate with any further investigations.

A long article in the February 20, 1974, issue of *Ha'Olam Hazeh* confirms much of the speculation about Geller's alleged cheating. Danny Peletz, partner to Geller's former promoter Mikki Peled, revealed how Geller dramatically predicted Nasser's death while the psychic was in the midst of a show. Backstage, Geller's promoter and friends heard radio news of the Egyptian leader's death, according to Peletz, then whispered it to Geller, who was still onstage. Feigning illness, Geller worked up the audience's emotions, then announced his vision of Nasser's

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death. "We knew it was all tricks," confessed Peletz. "We had the proof of it. We even helped him in it."

Hannah Strang reveals even more: "Uri and Simmy planned all sorts of tricks together, all based on my brother sitting in the hall and sending prearranged signals to Uri. . . . When they saw that their audiences were enthusiastic and amazed, they decided to develop their co-operation into a real industry. They went to the promoter Baruch Cotani, did a performance for him, and convinced him, just as they later convinced the whole country, that Uri had superhuman powers." To this day, Shipi sits in the front row at a Geller performance, decked out in his denim and sequined outfit, with a large aluminum camera case by his side and a Nikon in his hands, clicking away.

Uri Geller himself publicly has confessed to cheating. The admission was made on a television program broadcast in Israel in the spring of 1974 at which time Geller was being interviewed by Israel television correspondent Hagai Pinsker. The performer candidly admitted using tricks and lies to fool his audience, saying that his promoters pressured him into the deceptions in order to guarantee exciting shows. Geller also claimed that he had given up such sordid conjuring—then proceeded to attempt some metal-bending and watch tricks straight out of his customary routine.

On November 24, 1970, Uri Goldstein, a mechanical engineering student at the University of the Negev, bought a IL7.50 (approximately \$2.75) ticket to Uri Geller's nine p.m. performance at the Gilat Cinema in Beersheba two days later. Shortly after seeing the show, Goldstein sued Geller and his promoters, Soltan Artistic Representation, for breach of contract.

The defendants, argued Goldstein, promised to perform feats of mental telepathy, parapsychology, hypnotism, and telekinesis. Instead, Geller accomplished all his feats by physical means, "hidden with intent to deceive and did not do a single thing by any 'special powers.'"

The Beersheba Magistrate's Court heard the case in January, 1971. Neither Geller nor promoter Mikki Peled appeared to defend themselves. Instead, Geller sent an

Does He, or Doesn't He?

unsigned letter to the court dated December 11, 1970. It read:

LETTER OF DEFENSE. GOLDSTEIN AGAINST GELLER AND SOLTAN

1. When the cart got to the top of the hill, the horse's strength was exhausted. The carter put down his whip and got out of the cart to push. Rabbi Yossel the Tsadik [wise and just man] also got down from the cart to help the carter.

The carter said to him: "Rabbi, there's no need to help me. Go back and get on the cart."

The Rabbi answered: "I have to help the horse, because if not, when I come to the high court above, the horse will rise and accuse me that on this and that day, at the top of the hill, when his strength was exhausted from the weight of the burden, Rabbi Yossel did not come to his help."

"You fear the accusation of a beast?" answered the carter. "You, the Tsadik of our generation, you who help widows, orphans, and unfortunates?"

"It is not the accusation of the beast that I fear," answered the Rabbi, "but the idea of standing before the lord of the world of judgment with a horse."

2. Enclosed is a check for IL7.50 to cover the complaint of the plaintiff.

(unsigned)

Uri Geller

The judge upheld Goldstein's complaint, fining Geller and Soltan the price of the ticket plus IL20 (approximately \$7.60) court costs.

Uri Geller, son of Hoova, conjurer extraordinary, object of dedicated scientific scrutiny and vitriolic debate, was found responsible for calculated deception by his own unwillingness to oppose the charge. He carries that judgment with him to this day.

At Stanford Research Institute, Uri Geller never submitted to a physical search or X ray—because he never was required to. Did he walk into those laboratories armed with a tooth radio, paper-thin magnet, concealed fiber optics, radio-controlled dice, and other weapons of technological magic? Or did long-time confederates merely slip a fast hand signal or swift kick to lend advantage to his considerable skills as a master of psychological manipulation and deft sleight of hand? The SRI scientists claim that they were fully aware of Geller's history in magic and that they took extensive precautions to guard against his conjuring in their labs. Two years after the experiments, Harold Puthoff reveals that Geller confessed that he sometimes cheated onstage: "He told us about the license-tag routine, a great trick that he'd been persuaded to do by his manager." (This trick involves guessing the license numbers of cars belonging to members of his audience, information that was passed to Geller by confederates spying on persons parking their cars prior to a performance.)

Puthoff's and Targ's absolute assurance of rigid security during their Geller experiments is reminiscent of a famous Victorian detective story entitled *Cell 13*. The inimitable Professor Van Dusen wagers with his friends that he can escape from a maximum-security cell on death row. The prison officials scoff at such a preposterous notion and gladly accept the professor's challenge. By communicating with a confederate through a hidden rat tunnel, Van Dusen does escape. The stunned prison officials had been blinded by a certitude in their own infallibility. Admittedly, fiction is not fact, and a French prison is not the shielded room at Stanford Research Institute.

Yet I caught Uri Geller cheating during my personal audience with him—and it was not just on a license plate trick. James Randi says that he caught Geller cheating during a performance at the offices of *Time*. Yale Joel maintains that he proved Geller's cheating on a "psychic" photograph. A government scientist reports that Puthoff and Targ caught the showman cheating in their laboratory. Uri's former girl friend exposed him for cheating. The magician himself admitted on television and to his SRI experimenters that he cheated.

Where, then, does the cheating stop? Or does it? And

why the continuing controversy? Because of a few apparent successes in sensing drawings and dice under conditions that the SRI team claims were controlled. It is entirely possible that Uri Geller does have some modicum of talent for telepathic or clairvoyant reception of information. That, in fact, is all the SRI paper claims. Regrettably, even the evidence to support that limited conclusion is open to vigorous doubt, to which Harold Puthoff counters: "With regard to our work with Geller, there is one major difference between us and our critics and detractors—we were actually there." Remember, too, evidence that a psychic demonstration can be faked by a magician does not mean that it was.

I, personally, am not convinced of SRI's evidence for Uri Geller's abilities. There simply are too many questions left hanging. Standard scientific procedure in such unresolved controversies simply is to repeat the experiments, preferably by some other reputable group, to see if the results can be replicated. But in the case of Uri Geller, why bother? The fact that he is a magician, that he admits to cheating, taints any and all serious work with him. There always would be the lingering question: Does he, or doesn't he?

In the end, each person should weigh the conflicting arguments for himself. One who has is a California physicist, Jack Sarfatti, who participated in Geller's demonstrations carried out at the University of London's Birkbeck College. At that time, Sarfatti publicly endorsed the magician's paranormal talents. After spending additional hours with Geller and learning a little magic, Sarfatti recanted. He now believes that every stunt the Israeli does is nothing but conjuring, and he condemns Geller for duping glibly scientists. "Uri is a peasant," says the physicist bitterly. "He has no sense of ethics, no sense of truth or falsity."

During an airport interview early in his show business career, Uri Geller let slip this revealing aspect of his character: "I don't care what they say about me so long as they spell my name right."

My wife and I once spent an evening at the Magic Castle in Hollywood, where an old man placed a tiny pile of ashes

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on her fist. He passed his hand over hers and the ashes were gone. "Open your hand," he commanded. Astonished, my wife found the ashes inside her fist. We applauded, then moved on, seeking other diverting illusions. We knew the old man was a magician. But what if he had asserted that he was not? Had the air been filled with incense instead of cigarette smoke, and chants instead of ragtime, and had the man been named Sai Baba . . . or Uri Geller . . . what then?

Another saying from the Sufis may help reconcile this Babel of ambiguities obscuring the reality of Uri Geller: "Counterfeiters exist because there is such a thing as real gold."

Imagination completed what mere sight could not achieve. Looking down, I seemed to see through a transparent plant, through heather and solid rock, through the buried graveyards of vanished species, down through the molten flow of basalt, and on into the earth's core of iron; then on again, still seemingly downward, through the southern strata to the southern ocean and lands, past the roots of gum trees and the feet of the inverted antipodeans, through their blue, sun-pierced awning of day, and out into the eternal night, where sun and stars are together. For there, dizzyingly far below me, like fishes in the depth of a lake, lay the nether constellations.

—Olaf Stapledon, from *Star Maker*

THE COSMIC PSYCHONAUT

INGO SWANN FLIES STRAIGHT OUT OF *Star Maker*, A COSMIC psychonaut whose "remote viewing" voyages have girdled the earth and rocketed him past Mercury and Jupiter into star-swarm worlds of nether constellations. He is the elitist of the psychic club. Well read and curious, articulate one moment, spewing muddled jargon the next, this former United-Nations-functionary-turned-cosmic-artist waspishly holds himself aloof from the gaudy showmanship of Uri Geller. He prefers, instead, his privileged queen-bee status within the tight-knit hive of New York psychic enthusiasts. "I enjoy Ingo," says Judy Skutch, a veteran of numerous encounters with the gabby sensitive. "He can be as bitchy as he damned pleases; we have a good time." Most everyone does enjoy Swann's witty company. He probably has a better grasp of parapsychology than most professional researchers, and he does not hesitate to say so. At SRI his insistence on impeccable experimental design led to some furious battles. The results, however, are remarkable.

Swann achieved his first big psychic score in a series of experiments with Dr. Gertrude Schmeidler, a highly respected City College of New York parapsychologist and former president of the American Society for Psychical Research. Apparently by some unknown force of mind, Swann caused minute temperature changes in thumb-nail-sized black, graphite or bakelite targets, taped onto different thermistors (temperature-measuring devices). The thermistors were sealed inside thermos bottles to insure their insulation against outside temperature changes, and they recorded any fraction of a degree in shift in target

temperature. At Schmeidler's command, which varied according to a strictly defined random pattern, Swann would attempt either to raise or lower the target temperature in one of four different thermos bottles, holding his concentration to the task for forty-five seconds at a crack. Only once during the formal test sessions did the designated target change temperature more than one degree, so the effects were quite small, yet demonstrable. In fact, Swann's psychic gaze affected thermistors as far away as twenty-five feet.

The method he uses, he says, is to "mentally probe" inside the target thermos bottle, "exteriorizing" himself, i.e., traveling "out of body" with his mind. (Dr. Schmeidler discounts the probability that Swann influenced the set of electric pens recording the experiment, concluding instead that he did indeed psychokinetically alter the temperatures of the designated targets. But she does not offer the reasons for her choice.) The experiment was first reported in 1973 and already has become a classic in parapsychology. Its success established Swann as a powerful sensitive, willing to explore the range of his psychic capabilities within the confines of legitimate research.

Ingo Swann claims to have first become aware of his unusual talents at an early age. During the trauma of a tonsillectomy, the two-and-a-half-year-old Swann fought desperately against the mind-numbing effects of ether. When he finally succumbed, Swann remembers with amazement, "My consciousness hovered above my body," enabling the youngster to watch himself being operated on.

"Shit!" cursed the doctor as his scalpel slipped and cut the child's tongue, a scene recorded in detail by Swann's decorporealized vision. This same out-of-body gaze followed the nurse as she hid the excised tonsils on a sideboard. After the operation, young Ingo demanded that he keep his tonsils. Told that they had already been thrown away, he startled the medical staff by pointing to their hiding place, a fact that should have been unknown to him. The hospital experience was to become a commonplace occurrence for the psychic prodigy.

Born in the high Rockies of Telluride, Colorado—an old mining town and enchanted power spot likely to trigger anyone's latent powers—Swann tells of youthful psychic

tripping while following veins of ore under the mountains with his out-of-body mind. He claims to have viewed the Civil War bombing of Madrid, and terrible scenes of "people in gas ovens," all while still a child imbued with mysterious parasensory abilities. "This was a very traumatic thing in my childhood," explains Swann. "I began to retreat as a teen-ager and collapse into another person altogether." Sounds outlandish? Certainly. No more so, however, than what SRI claims the remarkable man irrefutably proved to them.

A degree in art and biology at Westminster College in Salt Lake City was followed by three years of army service in the Far East. The young psychic then moved to New York City to pursue his career as an artist. A job at the United Nations Secretariat helped pay the bills while he continued to work at capturing metaphysical and occult visions on huge canvases of brilliant hue. Aft Ship's View of Sagittarius, his best-known painting, is a six-and-a-half-by-ten-foot spacecape depicting a kind of starship corridor vista of the Southern Cross and Milky Way. It represents to Swann an "astral projection" that put his mind deep in the Milky Way of our galaxy while his body remained rooted in his fourth-floor Bowery loft. Again, Swann interjects his own special vocabulary, which softens the mind-bending trauma of his assertions: "I don't believe in out-of-body experiences. I'm very much in favor of 'exterior perceptions.'" He also protests use of the word "psychic," terming it a non sequitur. "It originally meant 'soul'; now it is taken to mean 'fraud' or anything in between," he says. Regardless of the terminology, Swann cooperated with investigators from the American Society for Psychical Research in New York, describing for them patterns, colors, and orientations of visual targets placed high above and at some distance from him. As a result of these and the Schmeidler experiments, his reputation as a cooperative sensitive with some mind-jarring powers began to grow. By now he had added the second "n" to his name on the advice of a numerologist who predicted that it would bring him money.

In the spring of 1972, Harold Puthoff was casting around for ways to initiate the SRI program in psychic research. He made contact with Swann through Cleve

Baxter, the New York polygraph investigator of plant "awareness," and the psychic was brought to SRI to help identify "plant auras" for Puthoff. That project was still-born. Shortly after Swann's arrival at SRI, he loftily informed the experimenter that he did not intend to waste his psychic time. "When I first went out there," recalls Swann, "they wanted me to try and levitate. That was their idea of psychic research. It was totally unreal as far as I was concerned. I said, 'If I could levitate things, baby, I don't think I would even bother with Stanford Research Institute.'"

Puthoff responded by challenging Swann to use his psychic mind to probe inside the Stanford University quark detector, a device buried in five feet of concrete in the basement of the Varian Hall of Physics. This is one of the most sensitive scientific instruments in the world, built to detect the almost mystical quark, a hypothetical sub-atomic particle suggested by Nobel laureate Murray Gell-Mann as the basic stuff of matter. Part of this esoteric detector is an extremely sensitive magnetometer protected from all outside magnetic influences by special mu-metal and copper shielding inside an aluminum container, all of which is encased in a super-conducting niobium canister, the high-technology equivalent of ancient Chinese boxes within boxes. When it was completed, tests were run to try deliberately to induce outside magnetic signals into the instrument. None could be. Even Uri Geller wisely refused to try his talents against this seemingly impenetrable apparatus. "As a first test as to whether Swann was genuine or not, before I got led down the primrose path," recalls Puthoff, "I just hustled him on over there and said, 'There is a magnetic instrument down in this super-conducting vault. Can you do anything to it?'"

Swann felt duped. He had expected to find a small instrument sitting on a table. A tiny graphite thermistor in "Gertie" Schmeidler's cluttered laboratory was one thing; but an unknown mass of instrumentation buried in concrete might prove even a bit too "immaculate" a test for Swann's fabled talent. At first he wanted to back out, yet lingered. After all, he thought, the device was only five feet away, the same as Schmeidler's canisters. Over an hour before Swann's visit, a team of Stanford physicists—

including Dr. Arthur Hebard, one of the builders of the detector, and Martin Lee, of Stanford's highly regarded linear accelerator group—had set up a slowly decaying magnetic field inside the magnetometer. A stylus recorded the resulting signal, tracing a smooth, red-inked sine wave* indicating that the system had been running without perturbations for over an hour prior to Swann's arrival. The psychic decided to accept the challenge. "I moved my seat of consciousness down into the innards of the magnetometer," recalls Swann, describing how he believes he accomplished the feat. (Vague, yes—but no more so than when you try to explain how you raise your arm above your head.)

After about twenty minutes of steady concentration, the signal suddenly doubled its output, a startling phenomenon that lasted about thirty seconds. Stunned silence greeted Swann's improbable feat. Dr. Hebard laughed self-consciously, suggesting that "noise" in the electronics might explain the mysterious fluctuation.

"What, then, would be an unequivocal indication?" challenged Swann, growing more confident.

"Stop the trace," replied Hebard.

Zonk.

Swann did exactly that. The recorder penned a wiggly but relatively flat trace for about forty-five seconds—in essence, stopping the decay rate of the artificial magnetic field. The room, now crowded with graduate students and gawking physicists, rang with cries of astonishment. Swann then "let go," and the output resumed its normal sinusoidal pattern.

"The word got around quick and the physics students were coming in, their eyes that big," laughs Swann, goggling his eyes in mimicry. "Really, I felt so sorry for them, because you could see that their whole world was just falling to pieces." Questioned by the scientists as to what he perceived himself doing, Swann answered that he had "direct vision of the apparatus inside and that the act of looking at different parts seemed to him to be correlated with the different effects." As he described this, the output

* A sine wave looks like the sinuous pattern made by holding one end of a rope and steadily shaking the other end up and down.

again doubled for a brief period, then took an unusual dip. Questioned again, Swann explained that he was looking at a new part, a niobium ball sitting in a cup. He was asked to cease and desist, and the apparatus immediately reverted to its normal output, according to Puthoff's official write-up of the incident. Discussion of other matters ensued, and the instrument continued to run its normal wavy course. At one point Swann began describing what his psychic "X ray" vision had seen inside the magnetometer—and the signal frequency increased tenfold, until again Swann was asked to stop. At this point, the pattern reverted to normal. Tired and victorious, the psychic retired from the scene while the instrument was left to run for another hour to check for artificial disturbances. There were none. Physicists Hebard and Lee co-signed Puthoff's official data sheet, attesting to Swann's mind-probing feat.

At one point in the demonstration, Swann sketched an accurate diagram of the instrument's interior, "apparently with some form of direct observation," concludes Puthoff. "Barring outright fraud and collusion, for which we looked but found no evidence, it appears unlikely that he would have had a chance to look at a diagram beforehand," says Puthoff, "since he did not know that this particular piece of apparatus was to be used until we arrived in the laboratory."

Swann's explanation?

"You can get a picture in your mind, so in most people the seat of consciousness examines the physical universe through memory input. But it doesn't necessarily need to do that. We can actually see it as it is where it is, and at that time this intention—which is probably a charge of some sort—will have impact upon that area. In this sensitive instrument, it showed that it did." Clear? Not at all. But whatever Swann did that June afternoon was sufficient for Puthoff to conclude that here was a subject worthy of study. The problem was finding money to support the studies.

A funding angel descended in the form of a fried chicken. Earlier in 1972, the Colonel Sanders of the Southwest, George W. (Bill) Church, Jr., of San Antonio, established a nonprofit foundation called SURF (Science Unlimited Research Foundation) to investigate the Baxter

effect with plants and other "biofield effects." According to Jim Ewing, executive director of SURF, Church founded the psychic research organization "at Hal Puthoff's suggestion," an assertion that Puthoff denies. Nevertheless, Bill Church seeded the new foundation with one million dollars worth of his company's publicly traded stock. About two-thirds of SURF's annual seventy-five-thousand-dollar operating budget originally went for an in-house study of the Baxter effect. According to Ewing, all Puthoff received was ten thousand dollars in seed money to begin work with Swann. The remaining thirty thousand to forty thousand dollars necessary to support the ensuing eight months of work was written off against SRI's own in-house budget, says Puthoff.

Swann reports that he was paid a salary at the "college professorship level" for his formal work, which ran from December, 1972, through August, 1973. These dates are misleading, though, since Swann's tenure at SRI was fitful at best. Squabbles over experiment design caused him to "resign" four times, even flying back to New York twice. "I don't know how I survived," sighs Swann. "They just read too many science fiction books. They [the experimenters] just take science fiction and superimpose it over science and say, all right, now, let's try to do all these things that the science fiction authors have written about. It's never going to happen that way, as far as I'm concerned." In Swann's critical judgment, both Puthoff and Targ were naïve when they began their psychic experiments. "We had some really bad arguments," he confides. "Most of the dissension stemmed from philosophical differences over what kind of experiments to perform." The researchers wanted Swann to interact with material objects, to measure him trying to bend laser beams or levitate one-gram masses, and to record his brain waves during telepathy. But the psychic resisted these efforts, feeling that they depersonalized him, making him into a piece of meat to be poked and prodded.

"There is a whole thing about biofeedback experiments that seeks to remove the subject as a person and just watch his physiological organism do what it does," protested Swann. "They could do that with dead bodies, as far as I'm concerned." While running the temperature-changing

experiments for Gertrude Schmeidler, Swann refused to take a standard psychological ink-blot test. "Here you have psychology that has adamantly denied the existence of psychic happenings; their whole science is built on the fact that these things are impossible. So I don't for the life of me see how any test designed in that kind of paradigm is going to inform them of something they don't believe is possible. I won't do those things," protests the psychic, betraying some of his rigid anti-psychology bias.

Much of SRI's early work with Swann concentrated on having him try the ten-can roulette test, guessing which can held the target. The experimenters were anxious to find correlations between different target materials and the success Swann had in spotting them. Aluminum, stainless steel, sulphur, water, mercury, wood, plastic, oil—many different kinds of targets were used, all to see if (in Swann's words) "different molecular frequencies would require a different psychic punch." Piles of raw data from Swann's experiments still lie unevaluated in the SRI vaults. In the one hundred fifty working days he was at SRI, Swann says that he ran some seven thousand visual experiments and five thousand psychokinetic trials.

Then came the clincher.

Many times Ingo became bored with an experiment. He told Harold Puthoff that when that happened, "I just close my eyes and go off someplace. Maybe we can turn that into an experiment." Swann elaborates in his customary, metaphysical jargon: "I got the idea: How does somebody who's conscious interact with the physical universe, assuming he doesn't have sensory and data input? That gets to the problem of how is it that one spots oneself in the physical universe. I said that the whole thing must be a system of thought. They [scientists] know what the eye does and what it sends to the brain, but they don't know how anything is really perceived in a cogent, intelligent manner. So, I got the idea that one of the interfaces between the nonmaterial universe and the material universe must be abstract thought. I said it could be that simple; I bet it is."

The result was a suggestion to Puthoff and Targ: "Instead of using concrete targets, why don't we use abstract targets? Words, music, coordinates, anything that pertains

to the physical universe but in itself is not physical," recommended the sensitive. "But I had to fight to get that experiment run." With good reason. Neither one of the scientists thought it possible simply to give Swann a geographic coordinate of latitude and longitude and have him describe the corresponding features of that place.* To think that he could is an affront to common sense. They balked. "But I'm a pretty strong bastard when I get my mind to it," says Swann, justifiably proud that he eventually won out.

Swann would arrive in the morning and plunk his Kewpie-doll frame into a soft leather chair in the experiment room, "the one with that ugly orange carpet on the floor," sneers the artist with a twinkle in his eyes. Several different SRI staffers, in addition to Puthoff and Targ, fed him geographic coordinates, at first just degrees and minutes of latitude and longitude. Sometimes the choice was simply an interesting place, sometimes a site visited overseas by someone from SRI. Many different methods of coordinate selection were used. Swann would do about ten a day, sitting there puffing on his favorite slim cigar, sipping coffee, while mind-tripping around the world. All that was required of him at first was to guess whether the coordinate was over land or over water. For example, 27° 30' South, 137° 30' East was one set of coordinates given Swann. Anywhere from two to twenty seconds later, Swann would answer. In this case, "water" was his correct answer, since this coordinate centers on Lake Eyre in south-central Australia.

"We did one series where we wanted to see whether he just knew the map very well," explains Puthoff. "So we would find tiny pockets of water amidst large land masses, tiny, little islands in the middle of oceans, just to see if he was giving 'ocean' for ocean type of coordinates." Swann's hit rate in the beginning was only about forty-five percent. By the time one hundred coordinates had

* Geographic coordinates is the system of lines drawn on maps used to identify specific locations. For example, a typical test that Ingo Swann might have been given would be to tell him the coordinates 40°40' North, 74° West. He then would have to try to "see" what place those coordinates identified; in this case, Manhattan.

been tried, his correct answers improved to around seventy percent. The coordinates for the day were dropped into a black bag and picked out separately by one of the experimenters. After each try, everyone would rush off and check Swann's response with a map. Once, in response to a coordinate, Swann told the research team, "I've passed over a big body of water, but I'm now on land." Checking with a map tacked up on one of the researcher's walls in another office, they told him that he had missed. He protested. So out they all marched to buy a *Times Atlas of the World*. "That showed the coordinate wasn't over the body of water," boasts Swann, "but on a promontory that stuck out into Lake Victoria. I was fifteen miles inland on that. They were amazed. I started boggling."

As the tests progressed, Swann's psychonautic vision was able to focus in on more and more details of the target sites. "Once, they gave me the coordinate for the city of Madrid," recounts Swann. "I said, 'I'm right over some fucking big city someplace.'" Swann's cosmic eye continued to hone its vision, focusing in on the "jungles" of Borneo, "dry mountains" of Tibet, and for coordinates 30° North, 32° East, Swann described: "Ah, looks dry, like Italy; no, not Italy; what are those things in the far distance? They look like pyramids. Is that Cairo?" The Egyptian capital lies forty-five miles west of the given coordinates.

So far, though, a good geographer or someone with photographic memory—perhaps A. R. Luria's famous Russian mnemonics genius—probably could have scored the same successes. After completing more than one hundred coordinate experiments, the experimenters' dilemma was how to rule out the possibility that Swann somehow might be cheating. Puthoff: "Ingo says he closes his eyes and sees a place, just like you would imagine your home, except for some reason, reading off the coordinates he says turn on a picture of the place. So the way we finally got around that was to do experiments with him where people would give us coordinates of places like train stations or airports or laboratories they visited. In that case, it wouldn't be on a map Swann could go to. Also, under those experiments, we wouldn't know what the answer was [to eliminate possible telepathy]."

This second phase of remote-viewing tests forced Swann to zero in on coordinates given in degrees, minutes, and seconds. That meant that the cosmic psychonaut had to locate an actual place to within about one hundred feet somewhere on the earth, then describe what he saw in his mind's eye. At first, the task seemed overwhelming. But it worked. Munich airport; the railway station in Augsburg, Germany; a nearby navy blimp hangar; Golden Gate Bridge; specific buildings within a school complex; roads; trees, and even a flagpole—all were targets that Swann successfully zoomed in on, according to Puthoff and Targ. The coordinates in many cases were provided by members of SRI's overseas staff, who had "ground-truth" knowledge of sites they chose.

Up to this point, complete recall and—perhaps more probable—collusion might explain Swann's remarkable vision. But there are no clues in his background to suggest that his memory capabilities are super-powered. (That leaves collusion.) Is Swann conspiring with someone other than the investigators and thereby tricking them? Or are either Puthoff or Targ, or both, colluding with Swann? Each investigator insists that he has independently verified results with Swann, as with the other subjects at SRI, on occasion keeping the other in the dark about what the target is. The likelihood, then, is that if there is collusion, both experimenters are guilty. But with Swann, much more than with Geller, even unconscious help by the researchers seems to be ruled out, because the coordinate experiments were much cleaner, simpler to control. Like Geller, a constant flow of outside visitors was allowed to monitor Swann in operation. But unlike the showman's experiments, which consisted primarily of easily passed information, Swann—in the latter stages of his work—dealt with double-blind targets unknown to anyone at SRI. This is not to say that Swann could not have cheated. But if he did, he would have required an elaborate and expensive clandestine network operating in Washington as well as SRI to accomplish the feat. There is always that nagging possibility. Yet almost every security and intelligence agency of the government has had a representative fly in to take a look at Swann in action. Any collusion would have had to elude them, too. Many, in fact, provided their own coordinates to check

out Puthoff's and Targ's claims of Swann's abilities. They went away mumbling in disbelief.

One test was specifically designed to eliminate this question of possible collusion. A target list of ten coordinates was prepared by a federal agency, or combination of agencies. All levels of SRI refuse to reveal which branch of the government was involved. Perhaps it was the National Security Agency, Puthoff's former employer, or the air force, interested as it is in strategic reconnaissance. Most likely candidate—the Central Intelligence Agency. What is definitely known, however, is that several persons in Washington were involved in choosing targets. One at a time, a coordinate would be encoded to prevent anyone outside the experiment group from knowing the target, passed to an SRI staffer in the Washington office who telephoned the coded target out to California. There the coordinates were decoded and given to Swann in the experiment room. It did not matter if he looked at a map or not, because the specific features he was searching for did not appear on maps. The entire session was videotaped. That tape plus a written description of Swann's visions were shipped back to the East Coast for study by the interested parties. It is understatement to say that they were highly impressed.

Both Swann and the SRI experimenters turn inordinately coy when asked any details about this series of ten coordinates. Why, for example, does the *Nature* paper contain nothing about these experiments? Swann's answer: "They were confidential coordinates. But if you dare say I told you, I'm going to come out there with a bar and. . . . They were coordinates that certain people had an interest in."

"It was an operational test?"

"It turned into a very operational test, and everybody got really shook. This is between you and me."

On another occasion, Swann described the test of ten this way: "I don't know if you know it or not, but when we felt that we had a good experiment, the sponsor of the project had the right to test whatever it was we found. You see, the project that was set up for me was to go out to poke around for eight months and see if I could come up with something, no matter what, but a little bit

reproducible. Once we found that, the sponsor would then be informed, briefed on what the experiment was, and they were to set up the test hypothesis. So all the coordinates came from Washington. They were used as the test. They were triple-blinded to eliminate telepathy," continues Swann. "The sponsor asked somebody to get up a coordinate, seal it, and give it to them. They didn't know what it was. They phoned it out to Stanford, and we didn't know what it was. They said, 'You can look at the map if you want. But what we want is roads, houses, and distances between them, and all sorts of pertinent features like that, if they're there.'"

One day a new coordinate was phoned in. "You want to do it?" asked Puthoff, mindful that Swann was nursing a headache.

"All right, I'll do it," agreed the sensitive, chomping on his perennial cigar.

"The coordinates are 49° 20' South and 70° 14' East," said Puthoff.

Almost immediately, without any fanfare, mantras, or histrionic gestures, Swann began sensing images. "I see a mountain over there . . . it's either a mountain sticking up through the clouds, or it's an island."

Puthoff frowned at this response.

"What's the matter?" questioned Swann.

"Oh, I think you're wrong," said Puthoff, "because I went and checked the coordinates on the map before I gave them to you, and it's in the middle of the ocean."

"No, it's not," countered the psychic. "This can't be that far off. Where the hell is the map?"

Anxiously, they broke off the test to go check an atlas in Puthoff's office around the corner. The scientist discovered that he had previously looked at the wrong coordinates. Swann indeed had hit the correct target, mountainous Kerguelen Island in the South Indian Ocean, some thirteen hundred miles north of the Antarctic Circle. The next day, Swann again set his psychic scan on the island, spotting an airstrip, butane tanks, orange, air-inflated Quonset huts, flocks of birds, and a lighthouse.

"Where are the buildings in relation to the rest of the island?" queried Puthoff.

Swann responded: "I'll show you." Using his mind's

eye, Swann "flew" around the island's perimeter, sketching a reconnaissance map of the target, including the buildings at the eastern end. He used several sheets of paper that had to be assembled to form the entire map. It was an amazing performance.

Theoretically, the sensitive could have done some fast overnight geographic research, then returned the next day to fake his remote viewing. But there is no evidence to suggest that he might have ginned up the details with outside help. And Kerguelen Island is not exactly on every gas station map. For example, the largest-scale chart *National Geographic* headquarters has of Kerguelen is a 1968 French one that does show a settlement at the eastern end, along with a tall radio tower. But no airstrip is shown, and no symbols are there to indicate butane tanks, orange-colored huts, and birds (which simply could be a facile guess). So how did Swann know that he scored well?

"I was told," is his veiled response. "They [the Washington sponsors] would give cryptic answers like, 'There's nothing that you put on your map that's not there.'" For other targets, Swann was told by the government sponsor: "We went out and measured the distance between the buildings with a yardstick and it's almost exactly the distance you said it was." That's how I got my feedback." Such vagueness, however, irritated Swann, who prefers to receive a post-test description of an unknown target as a way of clarifying his remote viewing skills. "Once you know you have nonsensory perception, you need to know your rate of accuracy," he explains, "so you can readjust to find blind spots. For example, for a long time I couldn't 'see' the color purple at all. It just didn't register. Whatever it was the seat of consciousness does, it was not duplicating those wavelengths."

Another target fed from Washington turned out to be the coordinates of someone's vacation cabin in the Blue Ridge Mountains. Swann nailed it. Foreign targets also were included in the Washington test, but again Ingo plays coy about specifics.

"Russian or Chinese targets?"

"That's true," he answers, a smile edging up the corners of his baby face. "We did foreign targets, yes."

There is a danger of over-interpreting what Swann de-

scribes. His substantial ego naturally is bolstered by dramatizing the circumstances of his tests. But sources outside SRI confirm Swann's startling results. After witnessing one performance, an AEC official declared in stunned amazement: "I'm quitting my job. Shit, there's no security left." Swann chuckles at some of these reactions to his work. "All I'm doing is sitting here, with a cigar, and this big puff of smoke every once in a while comes out of my fat face. This is nobody's idea of a great, mystical, psychic experimentation thing, you know."

Uri Geller and Swann overlapped briefly while both were at SRI. Swann says that he tried to stay out of Geller's way, making a point never to watch him perform an experiment. "I never wanted to say, yes, I saw anything, or no, I didn't see anything." They did converse a lot, though. "He's scared to death of me," titters Swann, aware that his teasing made Geller nervous. "I wiped him out one day. I have this tattoo on my hand that I had put there many years ago in one of my drunken-artist moments." The indigo-colored symbol resembles a small Egyptian ankh etched between the thumb and forefinger of his right hand. "One day Geller noticed it and said, 'What's that?'"

"Oh, that's the symbol of the outer-space group I belong to," confided Swann to the young man allegedly controlled by Hoova. "He ran out of the room," Swann laughs, "and for about a week after that every time he would see me he would slip into a doorway."

Dr. Charles Rebert, an EEG specialist who ran several tests with Swann, is one of the few people anywhere to debunk the New York psychic. Rebert claims that he was unable to spot any significant patterns on Swann's EEG traces, which may be why the sensitive says he did not like being hooked up with electrodes. Swann also was unable to replicate the Schmeidler thermistor experiment for Rebert, even though the SRI sensors were about an order of magnitude more sensitive than those used originally to record Swann's powers of remote temperature change. Rebert says that Swann complained that he could not penetrate the aluminum canisters holding the SRI thermistors. Somebody may be spewing sour grapes; it is hard to tell whom.

While at SRI, Swann even tried his mind at predicting the future. This psychic Delphi method, named after the famous technique developed by Norman Dalkey at Rand, was a serious attempt to cut through some of the mass of futurist data accumulated by another division of SRI, The Center for the Study of Social Policy, run by Willis Harman. Using academic forecasting techniques, Harman's project had come up with a scenario of fourteen widely varying futures, ranging somewhere between *Brave New World*, *Utopia*, and *That Hideous Strength*. The clients bucked it back, according to Swann, protesting that they had paid to know the future, the most likely probability. Enter Swann, with a suggestion for Harman, who had been a highly interested observer in the Puthoff/Targ experiments: "Bill, why don't we set up an experiment with three people who have some track record of making good predictions that do come off, and ask them to scan over the next twenty years?" That is exactly what SRI did, using Swann and two other psychics who remain anonymous.

"But what a dismal future!" moans grim-faced Swann. "Everybody would go out and kill themselves if they really took it seriously."

Dismal in what sense?

"The dissolution of America as we know it," he answers, "the shifting of world domination to multicorporate structures, which is just now occurring. In all their [SRI's] predictions, they have the great crisis period put at about 1980 to 1981, and one at 1985. So I was really surprised. I said, 'No, it's not going to be 1980; it's going to be 1973 and 1974. It's so totally changed the whole social situation in a whole new direction that the spring of 1974 is probably the biggest one coming.' Then I opened these other two guys' things, and there, they say the same thing."

The predictions were made in late 1973. It is tempting to conclude that Swann's augury foresaw the ensuing presidential abdication the following year. The more important fact is that SRI seriously investigated the possibility of making a formal psychic prediction of the future. The idea is not quite as far-out as it appears. Close to SRI, at the non-psychic Institute for the Future, specialists in "futurology" attempt to predict coming events for clients

in the military and business, using similar consensus techniques based on what they term "informed opinion."

Moving to more cosmic projects, Swann volunteered for a mind-probe mission to Jupiter. That's right—Jupiter. Under the auspices of CCNY researcher Janet Mitchell, an associate of Gertrude Schmeidler, Swann and a fellow psychic, Harold Sherman, of Mountain View, Arkansas, agreed to send their collective minds zooming off to the giant planet about two weeks before NASA's Pioneer 10 probe skimmed by, radioing back the first closeup look at the mysterious planet. The psychics' thirty-minute-long description is straight out of *Star Maker*, even including a highly unlikely vision of a mountainous surface hiding beneath the swirling atmosphere. But their collective descriptions included nothing that could not have been culled out of a simple astronomy book, and the fact that they "saw" mountains is directly contrary to every current-day model for the planet. Now, if we ever do discover mountains on Jupiter. . . .

An even better opportunity for the two cosmic psychonauts presented itself a year later during the Mariner 10 fly-by of Mercury. More than two weeks prior to the spacecraft's passage, according to their notarized reports, Swann and Sherman (an astronomy buff) directed their attention to the planet Mercury. Its distance from earth and proximity to the bright sun make this smallest of the major planets a tough observatory target. Until Mariner 10's historic reconnaissance mission, planetary astronomers knew very little about Mercury. Swann and Sherman were, in effect, psyching out a virgin planet and conducting more of a true test—if one takes Swann's commentary seriously at all. The psychonaut himself discounts the effort as simply "a game, a fun thing." Such a caveat, of course, protects his psychic reputation. Either it is a legitimate test, or it is not. He cannot have it both ways. Interestingly, Swann correctly did predict the major scientific surprise of the mission—the existence of a magnetic field and magnetosphere for Mercury. Swann simply could have been trading on the widely publicized results of the earlier Pioneer mission to Jupiter that described the extensive magnetosphere of that planet. But his observation is worth noting. He also spotted a tenuous atmosphere surrounding

Mercury, another unexpected finding confirmed by Mariner 10 astronomers. But his psychic vision also included clouds and electrical storms in the atmosphere, along with surface liquids and tides, a virtual impossibility. Swann also saw water-washed land masses, one of the suggestions raised by photo interpreters of the Mariner mission, the big difference being that Swann's water-washing is still going on, while the scientific suggestion only hypothesizes surface liquids eons in the past. Several times in his commentary, Swann remarks on the beauty of the planet, oil-on-water refractions, leaping, rainbow-like auroras, and "low-keyed electric magnetic splendor." Mariner 10 did see strong ultraviolet auroral glows on the planet's night-side that were caused by intense bombardment of the thin, rare gas atmosphere.

The most farfetched Swann observation is his vision of lichens growing on surface rocks. If this almost impossible reality were true, it would be mankind's first known contact with extraterrestrial life. But NASA can relax. Mercury's surface is hot enough to melt lead, an unlikely environment for plant life, however humble.

Unlike most sensitives, Swann is relaxed about the endless skepticism he encounters. Twelve years of rubbing shoulders with U.N. diplomats might account for his tactful defense of paranormal realities. He suggests that the debunkers go off and conduct their own research "based on their skepticism," leaving him alone to pursue his own goals. "I say nobody should be required to believe anything, because if it exceeds their reality, it simply exceeds their reality. Psychic researchers and psychics shouldn't dump on the public—or science—anything that exceeds realities too far. If these [psi] things exist, and I guess some of them do, the way it is presented ought to be much different," says Swann. A severe critic of most psychic research, Swann respects only a handful of the investigators in the field, most of all Gertrude Schmeidler. He agrees that many are outright frauds, and he seriously suggests that a lie-detector test ought to be a standard requirement for both subjects and scientists who pursue this controversial research.

As for Swann—well, he's moving on to where "you have to put up or shut up." He recently helicoptered out

from the Louisiana coast to an offshore oil rig where he directed his remote vision eleven thousand feet beneath the Gulf of Mexico to a potentially oil-rich salt dome. "About twenty-five geologists fainted on the spot," declares Ingo, promoting his own accuracy. In Kentucky, Swann toured potential oil-drilling sites at the behest of a petroleum company, reverting to his early childhood psychic treks along underground geologic structures as a demonstration to see if he could help the wild-catters find a gusher. "They lost a bit where I said they would," says Swann. "I said they would hit a large hole about three thousand feet down. They did, losing the bit. It cost them about five thousand dollars trying to recover it, but they never did." Swann just smiles.

Following in the footsteps of psychic sleuth Peter Hurkos, Swann attempted to track down Patty Hearst and the Symbionese Liberation Army soon after they first disappeared. Less than a week after the newspaper heiress allegedly was kidnapped from her Berkeley apartment in 1974, Edgar Mitchell rounded up a posse of psychics—including Swann—for an all-out effort to locate the missing girl. Swann came up with the feeling that "it was not a kidnapping in the usual sense," and "the big action will take place in Los Angeles."

But there is more.

While Ingo Swann was being tested at SRI for his ability to perceive details at remote geographic locations, a strange ship of the future was being readied just a few miles down the road from Ravenswood at Redwood City on the shore of San Francisco Bay. Ostensibly, the huge barge and mother ship, named *Glomar Explorer*, were being prepared to mine valuable manganese nodules from the ocean bottom for the recluse billionaire Howard Hughes. In the summer of 1974, about the same time the *Glomar Explorer* was stationed seven hundred fifty miles north of Hawaii, Ingo Swann confided that he had been "talking with people about deep sea probing," but in hushed tones he said that he could say nothing more, that he was not to talk about his current venture.

Almost a year after Ingo let slip this intriguing tidbit, news broke on the CIA's multimillion-dollar top-secret Project Azorian—the raising of a sunken Soviet subma-

rine using the *Glomar Explorer's* fifteen-thousand-foot-long tubular claw. Could Swann's secret tests to focus on coordinates furnished by unnamed Washington sponsors and his trips to peer under the Gulf of Mexico simply have been warm-ups for something far larger, in which the psychic sent his mind-probing gaze thousands of fathoms beneath the Pacific to help the CIA zero in on a sunken Soviet submarine? The speculation is well worth considering.

"If you assume that consciousness can transcend matter into space and time, then anything becomes possible," says Swann. "The whole paranormal thing is just to better the average," he continues, playing down science fiction fantasies of perfect mind communication. "Frankly, I don't think it goes much beyond that in relation to the physical universe."

But if Ingo Swann strikes a gusher or leads the CIA to more submarines. . . . No wonder the waiters in his favorite Greenwich Village restaurant endearingly address him as "National Treasure."

"Each person is at each moment capable of remembering all that has ever happened to him and of perceiving everything that is happening everywhere in the universe. The function of the brain and nervous system is to protect us from being overwhelmed and confused by this mass of largely useless and irrelevant knowledge, by shutting out most of what we should otherwise perceive or remember at any moment, and leaving only that very small and special selection which is likely to be practically useful." According to such a theory, each one of us is potentially Mind at Large.

—Aldous Huxley, commenting on
C. D. Broad's statement, quoted
from Huxley's *The Doors of Perception*

THE REMOTE MIND

THE BEIGE OFFICES AT STANFORD RESEARCH INSTITUTE apparently were laid out by the same mythical time-and-motion fellow who, with sharpened pencil and polished smile, comes nosing around, laying out the optimum warren-sized actuarial cubbyholes that everyone, everywhere, works in. In an attempt to liven up such drabness, Russell Targ has decorated his office with two large posters taped to the wall above his desk. The one on the left is a close-up picture of autumnal leaves, accompanied by the quotation: "A great deal of talent is lost to the world for the want of a little courage." To the right is a hard-edged abstract of two red-and-blue rectangles. The two posters, different in content, yet linked in a single gaze, represent for Targ the two hemispheres of the human brain. The scripted poster informs his linear, left-brain hemisphere; the abstract one delights his intuitive right hemisphere. That is his explanation, anyway.

Alone with Targ one day in the midst of discussing his personal beliefs—"I'm almost an unreconstructed logical positivist, one of the few left"—I saw him, on impulse, take out a deck of playing cards. After shuffling them several times, he cut the deck, then fanned it toward me in a traditional magician's gesture.

"Take one," he offered. "Look at it, then put it back. Be sure to remember it."

All magic tricks are relatively simple manipulations. What makes them intriguing—and believable—is the spiel that accompanies the illusion. Targ's obviously was well practiced. On some undetected cue, Hal Puthoff entered the room right after the card—which Targ had not seen—

was replaced in the middle of the deck. "I'm going to show you that we have powers, too," Targ said and smiled, turning to his co-worker. "Okay, Hal, what was the card?"

"Let's see," said Puthoff, frowning, immediately striking a swami pose. "I see a dark color, a dark color . . . black . . . the card must be black. Now let me get a good vision . . . I see puppy feet, several puppy feet . . . clubs. The card was . . . the eight of clubs." Which, of course, was right.

Pat Price was standing quietly behind Puthoff throughout the entire two or three minutes of the trick. "Now, would you like to see what I got?" he asked, leading us next door to Puthoff's office. There on the chalkboard, in large script, Price had written:

8 of clubs.

His ruddy face beamed with pleasure as he coyly refused to reveal whether telepathy, clairvoyance, or just plain conjuring had given him the answer. More puzzled than surprised, Puthoff laughed: "I know how I got the answer, but I don't know how Pat got it."

Patrick H. Price, Sr., had been under SRI's scrutiny off and on for several months, working under deep cover and near anonymity—the way he prefers it. He is reluctant to discuss his experiments. Unlike Geller, whose penchant for publicity is enormous, and Swann, who does not mind recognition as long as it is favorable and styled according to his own conception of himself, Price simply wants to come to the laboratory, do his psychic feats, go home, and fish on the weekends. There is some of the range rider's grit to his nature, independent, tough, acknowledging the world on his own terms—or terms impressed on him by a system that he has now made his own. Short, muscular, with calloused hands and lean belly, Price, at fifty-five years of age, betrays traits of a life more physical than mental. His crystalline blue eyes are overhung with mossy brows, eyes deliberately trained to stare without blinking.

Born December 8, 1918, the ninth of ten children in a close-knit Salt Lake City Mormon family, Price has always tried to follow his mother's favorite homily—"Every tub

stands on its own bottom." He guards the privacy of his early years like a mother wolf cuddling her litter. Just bits and pieces scramble out before being safely tucked away again. During World War II he was a student pilot with the army air corps. Later in his career he worked as an armed guard protecting the mails, built houses, even mined gold in Alaska. One day while running a periodic check on ground that recently had been dug open, Price discovered an acorn-sized gold nugget. Burnished to a shine, that nugget and a companion diamond now decorate the ring on Price's left hand.

When the scientists at SRI talk about Pat Price, they invariably bolster his credibility by dropping word that "he is a former police commissioner." He is a lawman, then, not an ex-magician with UFO contacts or a cosmic artist who gets his material first-hand. But, deliberate or not, the police commissioner label is misleading.

Most of Pat Price's professional life was spent as the manager of an equipment-packing plant. Old-time associates in Burbank, California, remember him as being an extremely aggressive, successful businessman, filled with unusual self-confidence. In the late 1940s he became involved in the part-time administration of Burbank, a small San Fernando Valley suburb north of Los Angeles. Price helped plan the "beautiful downtown Burbank" that takes such a ribbing from TV personalities. He served variously as chairman of the city's parks and recreation commission, and on the planning and fire commissions in the late forties and early fifties.

In 1950 a city councilman moved up to become city treasurer and Price was appointed to fill the unexpired term. None of this semi-pro politicking was full-time. After two years on the council, Price was appointed the city council's representative to the Burbank Police Commission to replace another councilman who was leaving. The commission was created the previous year in response to an illegal gambling scandal and a blowup known as the "Den-cara Stock Fraud," allegedly involving gangster Mickey Cohen. In the spring of 1953 Price stood for election to a permanent four-year seat on the council, but he was defeated and left the council in April at the end of his term. His total time in "police work," as he terms it,

lasted ten months. Price also served as vice-mayor of Burbank—for about one month. As a parting gesture, the council appointed Price to the post in the middle of March, 1953, shortly before he was to leave office.

There certainly was no hint in those days that Price might someday end up at a research institute being studied for psychic abilities. Even old fishing buddies do not recall ever hearing him discuss religion or philosophy, much less his expressing any interest in the occult. They knew Price only as a "Jack Mormon," one born into the Church of Latter Day Saints but who lapsed in his practice. Eager to let his son and daughters go their own way, Price does not discuss his psi abilities with them, and no other member of his family has stepped forward with similar talents. "I'm quite willing for them to pursue their life course in whatever direction they choose to move, rather than being affected one way or the other by mine," says the proud father and grandfather. "If they were to come to me and make an inquiry [about psychic gifts], I would give them the straight, honest goods." The family knows Price is doing research at SRI, he says, but they do not know the specifics of his superman stunts.

One day in the summer of 1973 while Hal Puthoff was running a coordinate experiment with Ingo Swann, the phone rang and Price, at the other end, introduced himself, saying that he had heard of investigations the SRI team was pursuing. On the desk in front of him, Puthoff had the coordinates to the vacation cabin along Skyline Drive in the Blue Ridge Mountains, one of the "classified" test coordinates Swann remotely viewed. Price also claimed remote viewing abilities, so Puthoff simply called his bluff and read Price the coordinates, asking him to "see" what was there. A few days later, Price mailed in a five-page description of the site, which Puthoff reports was "really quite accurate." Price was invited to join the SRI studies.

In the beginning, Price had troubles with remote viewing. Swann, who was finishing up his SRI stint, coached the newcomer with the advice to "take just what you see. Don't try to evaluate it or interpret it; just say whatever comes to mind." That was the key. According to the SRI team, Price soon was producing results in some ways more impressive than his mentor's. Hoping to improve on

Swann's work, Puthoff and Targ changed the test protocol. Instead of naming distant places as targets, the experimenters decided to increase the amount of descriptive information they could feed back to the subject by having experiment teams visit local target sites. That way, the researchers themselves would know more details of the target and, upon completion of the test, Price himself could visit the site in order to make his own comparison between outer, objective reality with his inner, subjective vision.

Bart Cox, chief of the Information Sciences Division, or one of his subordinates, chose the targets for Price from a list of a hundred kept locked inside Cox's top-secret safe. The experimenters themselves were not allowed to know the targets. Sometimes the sites would be written down inside a secret "traveling order" to be opened once the site team was on its way. In other instances, the person or persons driving to the site would decide spontaneously where they would visit that day. All sites were in the San Francisco Bay area within a half hour's drive of SRI.

For example, the team would depart at three P.M., leaving Russ Targ with Price inside the tiny Radio Sciences shielded room, the same Faraday cage that Geller autographed. Precisely at three-thirty Price would begin "scanning" for the site team, describing his vision into a tape recorder. The test would last a half hour. The tapes were transcribed, then given to a five-man panel of SRI judges, none of whom allegedly was involved in the experiments. They were given a list of the target sites. It was up to each of the judges to match Price's running narratives with the site best described. A total of nine target sites was utilized in the formal testing. The judges correctly matched Price's taped descriptions with the places visited twenty-four times out of the possible top score of forty-five. That is, if all five judges had voted to match Price's description with the correct site (a total of nine sites), the resulting score would have been forty-five. Odds that such a matching could occur by chance run in the billions. A more conservative method of calculating Price's score is to consider the plurality vote of the judges. Six out of the nine target descriptions were correctly matched by plurality vote, lowering the statistical impressiveness, but nevertheless astounding observers.

Preliminary tests inside an ultra-secure shielded room in back of the main SRI building were not as successful. This special laboratory has shielded walls, roof, and floor, all made of silicon steel, which prevents magnetic variations as well as electrical radiation from entering the room. The room was built according to National Security Agency specifications, so the computer inside the room can be run in complete secrecy without the possibility of anyone outside gleaning information from the computer. Without the shield, sensitive equipment could detect pulses of electricity along the power lines leading into the room—these are shielded—or variations in electric or magnetic radiation within the room itself. The special steel prevents that. It also prevents such radiation from entering the room.

Uri Geller sat on a daybed inside this special room, attempting unsuccessfully to sense targets outside. Whether it was because SRI's chief of security had to be with him during the tests—the room contains classified equipment—or a result of the magnetic shielding remains undetermined. However, Price also could not pull clear visions out of his head when he operated out of this double-locked, shielded room. Says Targ: "I don't know the reason why [they failed] except that room is kind of creepy." The little evidence they do have suggests to Targ and Puthoff that the room's impermeability to magnetic lines of force may have something to do with Geller's and Price's poor performances inside the room.

Most of the nine formal remote viewing experiments with Price reported in the *Nature* paper were conducted during October, 1973, in the second-floor Faraday cage that blocked only electrical, not magnetic, radiation. In the first two experiments Price was "closeted" in an outdoor park; he remained inside an SRI office for experiment five. Targ was with him at all times. His prime duty, he says, was "to keep Pat's left brain from becoming engaged," that side of the brain now thought to be responsible for linear, analytical, and verbal skills. "We were not interested in his analytical opinions. I must have told him a thousand times, 'Just tell me what you are seeing, not what you *think* you're seeing.'"

The targets for Price's experiments were:

THE SEARCH FOR SUPERMAN

1. Hoover Tower at Stanford University
2. Palo Alto Baylands Nature Preserve
3. Stanford University Radio Telescope
4. Redwood City Marina
5. Dumbarton Bridge Toll Plaza
6. Palo Alto Drive-in Theater
7. Allied Arts and Crafts Center
8. Church of Our Lady, Portola Valley
9. Rinconada Municipal Park

Targets one, two, five, and six were decided upon by the traveling team after they had gotten into the car. Price scored well on the first two, but he totally bombed out on the toll plaza and had only one judge correctly match a description with the drive-in. Bart Cox drove to targets three, four, seven, eight, and nine without telling anyone what they were and without writing down his choices. In order for collusion to work on these, someone would have had to follow his car, then pass the word to Price. The judges gave a high correlation to Price's descriptions on the first three of these targets.

Following is a summary of some of Price's remote viewing experiments, a summary condensed from the half-hour tapes made by the SRI experimenters.

Hoover Tower (October 4, 1973)

This two-hundred-fifty-foot-tall tower rises over the Hoover Institute at Stanford University, about two miles south of SRI. The experiment team passed the Spanish-style colonnade on campus on their way to the tower, then ascended to the top and remained on the concrete observation platform, viewing much of the San Francisco Bay area. The university's main library is just in back of the tower edifice, and the Hoover Institute itself houses a large collection of books.

Price's description: "I get them on a ridge or bluff overlooking the ocean." "I would say they are about four hundred feet above sea level." [Later] "I had a flash of being in a room with a Spanish-tile floor and a colonnade, about three miles south of here. Outside the colonnades

The Remote Mind

I get the feeling that it's a library or a museum-type with an exhibit there. I was just looking around. The area that I have seems like it would be Hoover Tower." [Later] "I keep flashing on Coit Tower [in San Francisco] and actually looking through Ann's [his wife] eyes. I had the perception of her looking up in the top of the tower and leaning against the concrete area."

Redwood City Marina (October 5, 1973)

This municipal small-boat marina is located four miles north of SRI on an inlet leading to San Francisco Bay. A large restaurant, Charlie Brown's, is also there at water's edge. Curiously, SRI's official write-up falsely describes the restaurant as Chinese, a mistake somewhat mitigated by the fact that the restaurant does have an oriental ambience to the outside, but at best, such description is a half-truth. Bart Cox chose this target while on the way to another one when his car got bogged down in traffic. He canceled the original choice after taking a right turn to escape the jam.

Following is the complete transcript of Price's description of what his mind's eye saw. The experimenters scored this effort as an "excellent hit," a judgment I confirm by having walked around the site myself.

TARG: Pat Price, Russ Targ, and Hugh Crane are in a shielded room at SRI; the time is three-ten. A target demarcation team that includes experimenter Hal Putthoff and SRI division director Bart Cox has been dispatched to the target, chosen en route by Bart Cox. All of the experimenters are in ignorance of the target Bart has selected.

It's just three-fifteen. We expect our travelers to arrive at their location in about fifteen minutes. While Hugh Crane, Pat Price, and I are all waiting, Pat will try and take a look and see where the travelers will wind up in fifteen minutes when they get there.

PRICE: It is in a direction about like from here.

Yeah, I see the little boats, some motor launch, some little sailing ships, sails all furled, some with the

masts stepped and others are up. Little jetty or little dock there.

TARG: You want to keep looking, or shall I kill this and see what happens when they get there?

PRICE: Let's see what happens when they get there.

TARG: It's three-twenty-eight; Hugh, Russell, and Pat are in a shielded room on the second floor of SRI, and we're within a couple of minutes of the estimated arrival time of our travelers at the remote site. Hugh, would you look at the tape recorder from time to time to make sure the wheels are turning?

PRICE: I think I know where they are—they're back in the SRI office.

There they are.

Up and down, up and down. . . . Let's see if I can find those little stinkers. So far, all I can see are the wheels in the recorder turning . . . very interesting.

I can see where they were. Now let's find out where they are.

Looks to me like they're standing on blacktop—aspalty concrete overlooking water. They're maybe five or six feet higher than the water level around them.

I've got them located in one place, so I'll scan around and see that I don't pick up some secondary locations.

This time I get them in the northeast quadrant from us.

In the four-mile range.

I can see up and down the bay by standing. . . . They look like they may be about five, six feet above mean sea level, and I can see up and down the bay.

It feels a little breezy.

Tastes . . . it's not quite a salty taste; it's more like a brackish smell and taste.

Right now they're standing with the sun to their backs and they're looking essentially east and a little bit south.

Looks like the parking lot is slightly elevated at the back of them—it looks like you walk down a set of wooden steps, maybe four or five steps.

See a couple of small buildings.

I kind of get the feeling of either standing on a dock or a ridgeway or a causeway or something of that nature.

Funny thing—this flashed in—kinda looks like a Chinese or Japanese pagoda effect.

It's a definite feeling of oriental architecture.

That seems to be fairly adjacent to where they are.

Further back from them inland seems to be a grove of eucalyptus trees. They appear to be eucalyptus trees—there's a slight wind blowing in them.

The ground to freeze on doesn't look marshy; it looks almost like decomposed granite. It's fairly light colored; it's not sand; it's coarser than sand—decomposed granite structure.

It looks like I can see some ballasted rock—it looks like gray granite stacked around.

I'm going to go elsewhere for a while and then come back to them.

TARG: Aren't you describing something that could be characterized by a dock at the side of the bay?

PRICE: Or a causeway sticking into it, or a little jetty sticking into it.

TARG: Are there any boats in your field of view?

PRICE: Seems that behind them and to their right—they're facing the bay—in kind of like a causeway or promontory sticking into the bay is boats, moored and parked.

Looks like a boathouse—has a lot of glass in it, which surprises me.

I keep seeing that Chinese architecture. I think in terms of buildings. . . .

TARG: What do you mean, you *keep* seeing it?

PRICE: Whenever I look for significant building forms, I keep seeing the Chinese architectural-type form. Fairly good-sized building.

TARG: Have something to do with the boat operation?

PRICE: No, it seems to be more like maybe possibly a restaurant or something of that nature. It's not remote, but it's not immediately contiguous to them.

TARG: Any other people around?

PRICE: Not right where they are now. Behind them, and that would be coming west, it looks a pretty heavily

traveled road, and there's an awful lot of activity there.

Where they're at is fairly quiet and serene—a little windy.

The wind seems slightly out of context for the temperature, but it is windy.

I feel coolness more than the heat.

TARG: You were going to try to go somewhere else before I pulled you back.

PRICE: Yeah. I was just scanning on three of the quadrants to see if I could pick up any perception in them.

I very definitely feel that it's more of a marine locale than it would be residential, business, or specific areas. It feels more marine.

Incidentally, does SRI have a boat?

TARG: We used to. I think they gave it up a few years ago—I'm not sure. I think I remember the name of the boat. They had been doing a lot of instrumenting or satellite charting, but I don't know whether it's on their own boat now.

PRICE: Well, I keep getting the feeling of a boat, and somehow I'm connecting it to SRI.

TARG: Do you see a name on it?

PRICE: The name that flashes—S-I-R-R-U-S 2.

TARG: Do you want to tell me what I think the name was—want me to tell you?

PRICE: Yeah.

TARG: I think the name used to be called *Arkania*.

Where do you think they are with respect to us here?

PRICE: I think they're right in about this direction here.

TARG: North.

PRICE: Yeah.

TARG: You said three, four miles?

PRICE: Yeah, not very far. Be down in the bay area. Seems to me there's a little point of land sticks out in the bay. The bay running this way and the land sticking straight out into a . . . kinda angles out into it.

Feels like boating activity, definitely—marine. . . .

Seems to me that Bart is standing on the far left up just a little in front of Hal and Ann and pointing

something out. He would be pointing down the bay south and out into the bay slightly.

He's pointing something out and discussing it.

I'll try now to see if I can put them into any other context.

Something just keeps pulling me right back down there.

TARG: Why don't you take a look at your pagoda and see if you can find out anymore about it.

PRICE: Right around the pagoda is grassy green—seems to be about two-story. I don't know where in the hell that would be.

I've never seen anything like it up here that I know of. It seems to be right there close to them and definitely Chinese architecture—oriental architecture.

There's a large single structure and then there is two little auxiliary structures to it that are also oriental.

TARG: Why don't you look at it from above and give us an idea of how big it is?

PRICE: Okay. That means . . . looks about forty-eight feet long, and it's about thirty-two feet wide—a lot of glass. It looks like a tile roof—oriental tile roof rather than a curved tile. It's flat.

Dark wood stain on it and there's an awful lot of bamboo—not green bamboo—dried, cut, and sliced bamboo.

Kinda looks like little oriental gardens around it.

Very quiet and serene.

TARG: How would you get from that thing to where they are?

PRICE: It looks like you'd go out a walkway and go maybe a hundred feet, and then you'd pick up the point and walk out where they're at.

Looks like it's behind them, oh, maybe three hundred feet from actually where they're at to this pagoda style.

TARG: I've been trying to picture it in my mind and where you went yesterday out on the nature walk—that has an oriental feel. Is there any relation to that?

PRICE: No, here it has manicured grass—not just rolling grass. Very, very precisely manicured. Very well kept. It would be almost like a . . . if you wanted to

demonstrate to perfection in oriental art culture and typify it by a pagoda, that would be pretty much what you'd have in mind is what I'm looking at there.

And geographically, it is not distant from them, you know. It's not like miles.

TARG: But from the pagoda you can see the ocean and the bay. . . .

PRICE: Yeah, on the bay side of the pagoda and the L-shape around it is rather high foliage that screens it from ocean breezes. From where they're at, you can see the upper part of it.

I notice some planes coming in and these are commercial airliners. They're coming in on an angle out in front of them and crossing on an angle about like that.

They're coming in from the south, and where they're heading for is the San Francisco airport.

The pagoda, the oriental configuration . . . see, I don't know this area at all, so when I see a thing it's difficult to put it in context . . . exactly how it is . . .

TARG: It's probably an advantage.

PRICE: Yeah. That isn't a disadvantage because when I go to the East Coast I don't have the foggiest idea. I don't have any preconceived idea of how it looks. Unfortunately, most of the places here . . . it's like that other than what you can physically see from the road, at the radar tower, I don't have the foggiest idea of what the scene there is.

TARG: We'll take you up there one day.

Rinconada Municipal Park (October 30, 1973)

This is a large municipal-swimming-pool complex, about two miles south of SRI. Standing near the pools, one hears the constant sounds of water as it bubbles through the filtering system.

Price's description: "Looks like a fountain of some type. I can see sheets of water rather than streams. Looks like a possibility of an aerating water or a filtration plant. I see water storage tanks [none there]. I see cement walkways. There are oak trees in an open area; underneath there is

green grass sprouting with little green weeds. They are about a mile and seven-eighths from here [correct]. There is a chain-link fence going all around [the pool complex]. The building looks like one story. It is concrete block painted a soft pastel. The door has a waist-high glass window [all correct]. Inside there is a long counter affair [correct].

At no time did Price think the place was anything other than a water purification plant, yet he made a surprisingly accurate drawing. He correctly sketched the two large pools: a circular one of one-hundred-twenty feet in diameter (ten feet larger than actuality), and a rectangular one labeled sixty feet by eighty-nine feet (correct dimensions are seventy-five feet by one hundred feet). A concrete bathhouse is located in the correct position with respect to the pools. Price's drawing, however, includes two water storage tanks that are not there.

Skeptical government visitors continually dropped in on Price and the SRI experimenters, anxious to catch a glimpse of the psychic in action and to verify for themselves all the strange stories they had been hearing. "In one case we had a visitor who went to one place, and halfway through he decided he didn't like that place and he went to another place," says Targ. "Price described *both* places." On one such demonstration for a potential sponsor, Price reportedly described activities inside a military headquarters in sufficient detail to curl the hair of the security-conscious visitor.

In their continuing quest for innovative experiments, Puthoff and Targ used walkie-talkies to provide an immediate communications link during Pat Price's remote viewing efforts. One radio was carried by the team Price was to tail psychically. Another remained with an experimenter alongside Price. The psychic would call out where he thought the traveling team was, what they were doing, and, even more interestingly, what they were seeing around them. Details of his perceptions then could be checked immediately via the walkie-talkies. In the jargon of cybernetics, the radios provided a real time-feedback that helped sensitize Price to even better psychic perceptions.

The analogy is with biofeedback, in which a subject, hooked up to an EEG, hopes to heighten his alpha brain

rhythms by listening to a tone get louder whenever his alpha increases. The subject does not know exactly what he is doing to increase the production of those slow-cycle brain waves; but when he hears the tone get louder, he knows he must be doing something right, and, therefore, he learns how to reinforce that particular brain state. The same with Price. He gives a description of what the traveling experimenter sees—like a certain make of car in the parking lot—and the experimenter radios an immediate “roger”; thus, Price knows to keep open whatever unknown brain channels fed him that correct perception.

Puthoff and Targ believe that remote viewing is “the easiest perceptual task that you can ask a person to do,” and that *anyone* can do it. Explains Targ: “We think that picking a target from an infinite universe of discourse is easier than picking a number from one to ten. The reason for that is, if he has an infinite universe of discourse, then a person has no preconception of what the target might be; consequently, he doesn’t have a lot of noise bubbling up from his unconscious. He’s willing to make his screen blank, as it were, and accept any picture that appears there in a stationary way.”

The SRI team screened about one hundred fifty “ordinary” people for their ability to view remotely. To their surprise, announces Puthoff, “everyone we have tried it with can do it.” The only condition: the subject allow himself to believe that he can do it. “No one we have tried it with has failed,” insists Puthoff.

They asked Mrs. Hella Hammid, a subject who produced successful psychic results in another series of SRI’s work, to try remote viewing, something she had never done before. To her astonishment she correctly described a “. . . red, wooden building with a pointed roof” that seemed “. . . artificial, like a movie set.” The target was a miniature-golf-course caricature of a little red schoolhouse. “My God, was I surprised when they told me what it was!” exclaims Mrs. Hella Hammid. She participated in a long-distance experiment while Hal Puthoff was in Costa Rica. She knew that the researcher was there, but she did not know his itinerary. At set times each day she tried to “see” what Puthoff was doing. He kept a log and a photographic record

of his activities at these times. Twice Mrs. Hella Hammid correctly zeroed in on Puthoff. He was driving at the base of a volcano the first time when she responded with “. . . large bare table mountain, jungle below, dark, cool, moist atmosphere.” In the second instance, all she got was a “. . . picture of Dr. Puthoff sitting in a beach chair by a pool.”

This chamber-of-commerce scene of the satisfied vacationer was “entirely correct,” according to Puthoff.

Once, when Pat Price failed to show up for a scheduled long-distance test, Russ Targ himself attempted to zero in on his fellow researcher, sending his own remote vision to Costa Rica to search out Puthoff. Targ quickly sketched the vision that came to him, a small airport by the water. That is exactly where Puthoff was, and, according to an SRI report to NASA, Puthoff’s trip there was “unexpected.”

Even one of Pat Price’s remote viewing judges, an SRI staff member named Duane Elgin, got into the act, precisely describing a Bay Area Rapid Transit (BART) station across the bay from SRI’s headquarters. Elgin correctly announced when Targ and a fellow researcher got aboard a train and left the station, saying “everything changed” and “I don’t see them anymore” at the precise time they boarded.

“It was this kind of remote viewing that caused us to quit talking about gifted people and ungifted people,” says Targ, earnest in his belief that perfectly ordinary people can duplicate the psychonautic feats of a Swann or a Price. “In fact, we had one [funding] swing to the East where we visited parapsychologists, government people, private foundations, and friends—and, essentially, every person with whom we did that experiment did it successfully. In my notebook I just made a list of different people versus the place that I had them visualize, and every time I did that, it was successful. I was just flabbergasted at the high success rate of that particular experiment.”

Puthoff enthusiastically seconds his partner: “We’ve never had a miss the first time” on any of the remote viewing experiments, no matter who they tested. Author Richard Bach (*Jonathan Livingston Seagull*), who has contributed some forty thousand dollars to support the experiments, has himself been one of SRI’s remote viewing subjects.

"I see no reason why psychokinesis, or remote viewing, or any other method that would be considered paranormal is not available to anybody," declares Pat Price with his usual unswayable confidence. "I refuse to have any [psychic] areas that I cannot do." Considerable bluster, except that Price's contention is backed by a Puthoff testimonial. Karlis Osis, director of research of the American Society for Psychical Research (ASPR) in New York City, has conducted several psychokinetic experiments with Pat Price—with brilliant success, according to Puthoff. In one test a feather was suspended inside a tiny, three-inch-square copper box and placed in a room at the chic ASPR headquarters on West Seventy-third Street. The feather was monitored by an infrared beam and photo cell that detected the slightest motion it might make. According to Puthoff, Price turned his concentration on the feather and made it move, merely by wishing it to respond to the unknown force of his mind. Price's psychokinetic feat was accomplished both when he was in New York and even transcontinentally while isolated in a shielded room at SRI.

"Osis is ecstatic," says Puthoff.

Well, he might be. If the experiment is indeed all Puthoff says it is, Price has demonstrated a truly significant talent for the paranormal, one that stimulates concern among government security officers.

One day, while I was in the midst of a discussion with the SRI researchers, Price appeared at the office door and quietly beckoned: "Hey, come here a minute," he said, flashing his customary goblin's grin. We proceeded next door to the narrow experiment room where a blue-beamed shaft of laser light silently measured deviations in the rotation rate of a brass clock pendulum as it slowly turned one way, then another. An automatic pen recorded the deviations on a moving strip chart. Price picked up a section of the chart and thrust it at Puthoff and Targ.

"Here, I did it," he said excitedly.

Scrutinizing two irregular pen scratches along the otherwise smoothly charted output, the two laser scientists calmly agreed: after lengthy effort, Price apparently had managed to alter either the rotation rate of the pendulum or the mechanism measuring it, a seemingly impossible psychokinetic achievement, comparable to Swann's alter-

ing the output of the Stanford quark detector. Price eagerly recounted his version of how he had gotten "into the pendulum" mechanism and altered its rhythm. No one took it as a controlled experiment. Noise in the recorder or a knock on the floor might have produced the funny marks. But Price was convinced that he had done it. And Puthoff and Targ believed him—because (they say) he has since duplicated the feat several times for them, on command.

Like Swann, Pat Price is taking his talents and moving out of the sanctified laboratory atmosphere into the rough-and-tumble arena of business. Shortly after scoring his impressive successes at SRI, Price was appointed president of Princess Coal Company in Huntington, West Virginia, where he plans to make commercial use of his remote viewing. On a recent inspection tour with his chairman of the board, Price reportedly spotted several veins of coal inside a mountain, a report backed up by the company's engineers.

The ever-confident Price even states that he can change the genetic structure of living things psychically, and he actually hopes to help develop hybrid strains of food for Kathys Farms, a subsidiary of Princess Coal. The fact that he is getting paid to pursue such seemingly outlandish goals means *somebody* must believe Price's assertions, however wild they appear.

Even Russ Targ is forced to seek refuge in his logical positivist upbringing when challenged by Price's outright assertions that he travels "out of body" to accomplish his feats. "Whether he's out of his body remains to be seen," cautions Targ.

Just how far out has Price's viewing been?

Price pauses a long time, staring straight at the questioner as if he had not even heard.

"I was looking at the term 'far out,'" he finally answers, then discounts the laughter greeting the bad pun.

"Global?" I ask.

"Oh, yes, that's a small marble."

"How about the solar system?"

"That's a smaller marble."

"Really?"

"Yeah, this is a beebee shot sticking out of a pigeon's

ass for about ten million miles. . . . That's just about the size of the thing we're on [earth]."

You have to ask: "How remote have you gone in your viewing?"

"Get your wildest concept."

"I'd like a straight answer."

"Actually, I'm giving you a straight answer. Get the wildest concept of distance that you can get, now just keep doubling it; that's how far out I've gone. That's not a wild answer."

"Have you been out to the edge of the universe and back?" Price responds calmly, as if it were just a summer jaunt to Europe.

"Oh, yes."

"What's out there?" I challenge.

"Zero. That's how you can tell the difference between the physical universe and when you're out of it. That's a very accurate description. If you see any motion or any activity, you're in the physical universe. When you get out beyond that, you're out of it. Then you can view it pretty much in perspective. That's pretty far out. It would violate the concepts of the average citizen."

Violate, hell. My concepts were getting raped, just as they had been when I talked with Geller and Swann. Listening to the superpsychics of SRI can turn a person black and blue all over—not from psychokinesis, but just pinching yourself to keep sane. Yet here was another vouchered-for individual quietly declaring that he has been out to the edge of the universe and looked beyond, from being into nothingness. At current calculations it is about fifteen billion light years out to that Sartrean signpost.

How does Price know *where* to look?

Prefacing his answer by saying that only similes will work to describe it, he explains: "When one can truly view the planet, the whole planet, as a beebee shot, anything on it doesn't seem hard to find. It's just that I seem to know it, boom. They [SRI] assign me the target and there's no starting out. It's bam and I'm right on it. Right now, just bam! For instance, if they're to give me a grid coordinate or something else, while they're actually telling me the words I'm already looking at it. It doesn't seem to bother me—figuring out how—I just do it."

Price continues: "I find my out-of-body talents very useful, aside from the research aspect. I don't have to worry about my wife, for instance. She conducts herself at all times exactly as if I were there physically. I don't have to worry about my mother. She's ninety-six years old, which is at a stage in life that many unexpected things can happen that the average person is worried about." Saying this, Price rolls his consciousness back inside his head and starts to search, mumbling, "I just poke around . . . she's okay . . . naw, she's not troubled . . . naw, she's not worried . . . watching the TV program . . . she's sitting there with the TV set . . . sister's in the leather chair, brother's in the other room, lying down in the bedroom. . . . [Then to his audience] That's down in North Hollywood."

Pat Price just ran a fast remote scan his mother, three hundred miles to the south, or so he claims. If anything bad befalls his family, says Price, it comes to his attention immediately—if he does not "intercept it" before it occurs. "Bad things don't happen," he insists, exuding all the confidence of a self-proclaimed true believer. "See, I'm a Scientologist, and that's the answer."

Oh.

The physical sciences, good and innocent in themselves, had already, even in Ransom's own time, begun to be warped, had been subtly maneuvered in a certain direction. Despair of objective truth had been increasingly insinuated into the scientist; indifference to it, and a concentration upon mere power, had been the result. Babble about the *élan vital* and flirtations with panpsychism were bidding fair to restore the *Anima Mundi* of the magicians. Dreams of the far future destiny of man were dragging up from its shallow and unquiet grave the old dream of Man as God. . . . And now, all this had reached the stage at which its dark contrivers thought they could safely begin to bend it back so that it would meet that other and earlier kind of power. . . . You could not have done it with nineteenth-century scientists. Their firm objective materialism would have excluded it from their minds; and even if they could have been made to believe, their inherited morality would have kept them from touching dirt.

—C. S. Lewis, from *That Hideous Strength*

WORLD OF THE THETANS

URI GELLER HAS HIS HOOVA. INGO SWANN THINKS HE WAS born with mind-probing powers. Pat Price? He says that his abilities, while latent in him since birth, were not awakened until he turned fifty years of age. "I was asked to sit down and look at some other guy for a period of time and do nothing. After about three minutes I found myself outside of my body, looking at him looking at me. It was very interesting."

Just like that. No incense, no Tibetan chanting, no two-hundred-dollar how-to course on astral projection—just your run-of-the-mill ex-gold miner, unzipping his unconsciousness and stepping out of body, gap-tooth country twang and all. Price previously had considered the possibility of such an out-of-body experience, but—slapping his chest—admits that he felt "if I got out of this [his body], I would drop on the floor like a piece of wet spaghetti. . . . I firmly held to the opinion that it was impossible, that it was a bunch of bullshit and couldn't be done. I had heard others talk of it and thought that was a figment of their imagination. . . . Now when it happened, and I looked and the thing [his body] seemed to run very well, I was confronted with the *fact* then, rather than a *belief*."

Price's experience, a complete anathema to the Western rationalistic conceptions of reality, received its psychocatalytic stimulus, not from drugs or mind-provoking set, as some may have, but from a first lesson in the highly structured and controversial process known as Scientology.

Scientology turned on Price's psychic abilities, he claims, by allowing him "a platform alignment of data." By this, Price appears to mean that he looked back over his life

and re-evaluated it, the result of which was a new perception that included an acceptance of psychic happenings as the norm, rather than the exception. "One remarkable thing I found about Scientology is that it don't [sic] provide you with any answers—they just ask the right questions. One then starts aligning his thinking within his own powers, but it depends on what he's been told [how] each individual ends up with his own perspective of how things are." Now, after "alignment," absolutely no question remains in Price's mind about what he does to achieve his remote perceptions. To him, "it's like gravity," just there. "There's nothing remarkable about me," he insists. "I think I best exemplify unaberrated human behavior, the potential capability we all have." All this is spoken while staring intently and unblinkingly into the eyes of his listener, a standard Scientology technique learned early in the curriculum as a means of asserting mind control.

Price's exotic philosophic outlook reveals the extent to which Scientology has him programmed to view the universe through the sharply refracted lens of its founder, former science fiction author L. (Lafayette) Ron Hubbard. Hubbard's brainstorm is an offshoot of Dianetics, which he introduced to the public in the early 1950s as a mental and physical health regimen. His latest system of technocratic power of positive thinking has experienced several seasons of bloom and fade. Today Scientology again is flourishing. Prospective members are signed up at Orgs (missions) throughout this country and abroad to undergo several stages of ritualistic and confessional mind-flushing. Each stage costs money, lots of money, carrying the follower further toward the goals of Clear, and Operational Thetan.

Originally, the state of Clear was the highest rung on Hubbard's Scientology ladder, the attainment of which was accompanied with eulogistic fanfare. The former self was discarded; long live the Clear. Anyone who attained Clear received utmost deference from others in the movement; they were the Eagle Scouts with all the merit badges. While the practice was still called Dianetics, a Clear was supposed to obtain "total recall of all perceptics [photographic memory]," freedom from all ills, and—most important of all for this discussion—telepathic abilities. As the years passed,

new rungs on the Scientology ladder were carved out by Hubbard, and the Clears received a *de facto* demotion. Today's Clear is simply "at cause" with himself, aware of his own basic purposes. Such a state recalls the ancient Greek dictum of "know thyself," a truly enviable state when achieved—but a far cry from the king-of-the-mountain status previously granted Clears.

The top rung in Scientology now is Operational Thetan. As in the case of clearing, each of the Operational Thetan (OT) levels (seven in all) is expensive to attain. But for Scientologists the money and effort apparently are worth it. One Los Angeles woman recently dumped ten thousand dollars into the effort to attain her OT-VII rating, only to become disillusioned with the movement and get out. In Hubbard's eclectic terminology, a Thetan is the immortal soul that inhabits each person. When the body dies, the Thetan boarder takes up new flesh-and-blood quarters. An Operational Thetan supposedly acquires the powers previously granted to the Clears—and more, including the capability to leave the body at will.

The method by which one attains these hierarchical Scientology ranks is called auditing, or sometimes, processing. The pre-Clear undergoes intense questioning by his auditor while holding a truth detector in his hands, called an E-meter. In effect the E-meter responds to changes in electrical conductivity of the skin, much like part of the mechanism on a polygraph machine. Innocuous questions such as "Is a monkey brown?" or "Is the moon pink?" give way to serious interrogation by the pre-Clear's auditor, while the E-meter's needle determines the supposed truth or falsity of the answer, and the degree of emotion the question elicits. Sample questions:

"Have you ever injured Dianetics or Scientology?"

"Do you think there is anything wrong with invading a pre-Clear's privacy?"

"Are you trying to get another student or staff member to have sex with you?"

"Have you ever used hypnotism to practice sex with children?"

"Have you ever practiced cannibalism?"

"Are you guilty of something?"

"Do you have a secret you're afraid I'll find out?"

[Not exactly your run-of-the-mill confessional.]

One recalcitrant Scientology pre-Clear was quoted in *Parents* magazine: "They keep after you, asking the same question over and over again until you tell them what they want to hear. You can't keep back anything. Later you realize you've spilled all kinds of secrets to an almost total stranger whose character or integrity you know nothing whatsoever about." Auditors used to forward reports on these sessions straight to Hubbard's overseas headquarters. Every private nook and cranny, every secret crevice of the mind, is probed during the auditing procedure. If the E-meter needle swings, indicating a supposed lie, the auditor bores in, forcing the pre-Clear to cough up every last detail concerning the event or feeling, until at last the needle stays put, betraying no further emotion on the part of the pre-Clear regarding that subject. He is said to have cleansed the *engram*—the unconscious trauma—from his memory. Hence, the word, "E-meter."

Scientologists are taught to be suspicious of psychologists, psychiatrists, police, and the press. A new recruit is screened, lest he be one of these. If so, he receives an almost sure invitation to leave and not return. A beginning pre-Clear is required to sign a total waiver of any claims he might bring against Scientology and has to agree to unilateral suspension or termination "for any violation of the codes and policy of the Church." Once a member is on the path toward the goal of Operational Thetan, he is held under strict control, mindful of Scientology's history of harsh recrimination against strayed members of the fold.

Writer Mike Murphy, one of the founders of Esalen Institute in Big Sur, strongly believes that covens of high-ranking Scientologists actually attempt influences over suspected enemies. While co-authoring a book with John Brodie, former quarterback for the San Francisco Forty-niners and a noted convert to Scientology, Murphy awoke in the middle of the night in great anxiety and pain, fearing he was suffering a stroke or heart attack. Eventually he calmed down. Nothing was physically wrong. The next day, Murphy questioned a minister of a mission. He be-

lieved that psychic powers had been used to give him a scare while asleep, the time a person's mind is most vulnerable to such psi attacks. The episode sounds like a Colin Wilson fantasy from his book, *Mind Parasites*—until double-checking with Murphy, who seriously suggests such possibilities. These oft-rumored, dark aspects to Scientology linger on, even though some who objectively try to follow the system's erratic course suggest that Scientology may be moving away from some of its earlier excesses.

Under a 1967 copyrighted policy letter signed by Hubbard (whose Sea-Org headquarters once was aboard a Mediterranean-based ship), those who cross Scientology could be labeled "SP" (Suppressed Person) or "Fair Game." Such a person, according to the order, "... may be deprived of property or injured by any means by a Scientologist without any discipline of the Scientologist ... may be tricked, sued or lied to or destroyed."

A second copyrighted policy letter over Hubbard's name was issued a year later, titled "Cancellation of Fair Game." It stated: "The practice of declaring people fair game will cease. Fair game may not appear on any ethics order. It caused bad public relations. This P/L [policy letter] does not cancel any policy on the treatment or handling of an SP." In other words, the P/L on SP was bad PR.

Scientology's peculiar acronymic vocabulary seems lifted straight out of NASA's mission control handbook. Most of it is simplistic engineer's jargon, adopted to impress technocratic souls raised on a diet of *Astounding Science Fiction*, orgone boxes, and visions of sublime, computer-run Utopias where the children of the state lie docilely swaddled in Skinner boxes. Scientology is an expensive, elitist, secretive, dogmatic, quasi-religious organization that preaches the road to psychic salvation. But why is the arcane world of the Thetans relevant to a discussion of paranormal investigations at Stanford Research Institute?

Because:

Harold Puthoff is a Class-III Operational Thetan (OT-III).

Ingo Swann is a Class-VII Operational Thetan (OT-VII).

Pat Price is a Class-IV Operational Thetan (OT-IV).

Bill Church, the man who established Science Unlimited

Research Foundation (SURF) "at Hal Puthoff's suggestion," is a Scientologist. While these words are being written, Church is in Los Angeles at the Scientology "Celebrity Center" undergoing the final rites of "going clear."

Even Edgar Mitchell has tinkered with Scientology, but he now says that he rejected it as "a trap." A person as curious as Mitchell would be hard-put not to have inquired, since the Palo Alto Church of Scientology is right across the street from his Institute of Noetic Sciences. Narconon, the Scientology-based drug rehabilitation program that operates in several federal prisons throughout the country, has offices in the same small building with Mitchell.

Eli Primrose, a Scientologist married to one of the Scientology ministers in Palo Alto, served as a lab assistant to Puthoff and Targ during many of the Geller experiments, and was responsible for film reloading and other technical tasks. She is no longer at SRI, having moved to Los Angeles for "additional courses" in Scientology.

Ingo Swann, who helped establish the Scientology "Celebrity Center" in Los Angeles, which continues to process numerous Hollywood movie people, thereby adding luster to the movement, claims that there are "fourteen Clears, more than I would suspect," working at SRI.

That is certainly more than anyone would suspect. But is it significant? Perhaps the particular mind set induced by Scientology training simply is attracted to investigations of psychic phenomena, is willing to explore new areas that demonstrate the primacy of mind. After all, the older religions of mankind also acknowledge psychic abilities. But unlike Scientology, their masters—Christ, Mohammed, Buddha—deplore these powers as an obstacle on the spiritual path, a temptation to self-glorification. Scientology, on the contrary, spurs its adherents toward uncovering latent supernatural powers.

Both Ingo Swann and Pat Price trace their full psychic blossoming to their lessons in Scientology. Price's first out-of-body experience was the result of a standard beginner's exercise in Scientology. The Scientology process, says Swann, removed the "blocks of perception," enabling him to see beyond his environment. "I wouldn't say it publicly, because it puts people on the defensive too fast.

But if somebody is willing to talk about it seriously, you know . . . in Scientology we seek to remove all the blocks on perception, and on anything else, locate blocks where you have blocks on your consciousness and remove them. This certainly results in a heightening of perceptions." Swann says that his interest in Scientology began in 1962 when he was in a period of sampling theosophy, Rudolph Steiner, and several other mind-exploring systems. Impressed with Hubbard's methods, he borrowed from the United Nations credit union the seven-hundred-fifty-dollar advance payment for his first auditing sessions. "That course absolutely blew my mind!" he exclaims. Some five thousand dollars and several years later, Swann is a top-grade OT-VII Scientologist.

"The seat of consciousness or the perceiving entity or the creating entity in Scientology is called a Thetan, a derivative of the word 'theta,' meaning infinity," explains Swann. "The idea is that this Thetan, which is you, operates at a disadvantage to the ratio of your blocks. Once he removes them, then he operates as a Thetan and has no more blocks and gets rid of them as soon as he locates them himself. 'Clearing' essentially removes from you enough of those blocks that you see the effects of the environment and then you can become 'aggressive.'"

Aggressive?

"I'm going to do what I want in this universe."

You are master?

"Master."

In 1973, Ingo Swann, OT-VII, Church of Scientology, was dispatched on a missionary effort to a worldwide gathering of psychic investigators and theorists convened in Prague—The First Conference on Psychotronic Research. There he presented a paper ("Scientological Techniques: A Modern Paradigm for the Exploration of Consciousness and Psychic Integration") that traced the emergence of a non-mechanical view of reality in the thoughts of several twentieth-century philosopher/scientific greats like Sir Arthur Eddington, Sir James Jeans, Wolfgang Pauli, Werner Heisenberg, and . . . L. Ron Hubbard. "The end point of the Dianetic and Scientology rehabilitative processes is considered to be the ability to be conscious and causal in any desired direction of activity, and

thus has implications for the development of alternative future histories in which psychoenergetic factors may play an increasing role," Swann declared in his paper. Translated, St. Ingo's Letter to the Psychotronics preached that Hubbard's way allowed a means of casting runes with men's minds, a way of dreaming dreams of the far future—and controlling those dreams as they birthed into reality. "Master."

Another SRI Operational Thetan, Pat Price, states unequivocally that he has no intentions of proselytizing for Scientology. "I hold very high the values of each individual to seek out his religious convictions on a one-to-one basis, by himself. Now, my way of disseminating Scientology is by my actions, not what I say. If I represent an aspect of living that the other person wants to have, then I say, 'Follow this road.' Now, if it's an area that he does not choose to have, then I never inflict it upon him." Yet Price is always quick to credit his newfound mother church for setting free his latent psychic talents, and he has no reluctance to voice L. Ron Hubbard's strident antipsychological, antipsychiatric teachings. "You say, why not psychologists in this field?" Price asks rhetorically. "I'll tell you. Very simply . . . because I wouldn't work with the bastards. . . . If he's a psychologist or a psychiatrist, to even talk to me he's got to have some other redeeming quality."

In fairness, no one at SRI hides his Scientology ties. No one volunteers them, either. Puthoff maintains that he is merely a "business acquaintance" of Bill Church. He counters the assertion by SURF's executive director that he counseled Church to form the foundation, which, if so, suggests a far closer relationship than Puthoff admits. Church himself chooses to remain silent in response to numerous requests to clarify his role.

Critics voice concern over what they consider excessive personal reevaluation required by Scientology's auditing process. Puthoff vehemently denies the accusation, insisting that he would never "unravel my guts to a stranger," thus jeopardizing his top-secret government security clearance.

At this point, non-Scientologist Russell Targ no longer can hold back. He bursts out, objecting strenuously to

the insinuations that Scientology might be intruding on his experiments. "We have a great tradition of burning witches, a thousand-year-old tradition of stoning the seers and the prophets!" he exclaims. "Scientology is basically a therapeutic, personal rehabilitation psychiatric activity. I don't think a person is a Scientologist any more than he's a Freudian or a Jungian." Targ is impatient with the suggestion that anyone, even an entire Org of Scientologists, could tamper with his results.

Consciousness experimentation runs high in California, but probably nowhere higher than on the peninsula where SRI is located. There is probably more per-capita growth tripping to Esalen hot baths and bioenergetic workshops along El Camino Real than anywhere else in the country. Harold Puthoff is no different from many other sincere individuals seeking expanded awareness. Gestalt workshops, Esalen, bioenergetics, Scientology—he says that he has tried them all. But, he adds, the exploration of different disciplines certainly does not make him a Gestaltist or an Esalenist. Maybe. However, one does not spend thousands of dollars and several years enduring the rigors of auditing to attain Class-III Operational Thetan and term it mere sampling. Puthoff's Scientology represents a substantial amount of dedication. The real question is: Does Puthoff's Scientology involvement in any way jeopardize his scientific objectivity?

"I think the first place where basically it can be disproven as an accusation," answers the scientist, "is simply that the experiments are set up with protocols in such a fashion as to prevent collusion by any group, whether it's males versus females, Scientologists versus non-Scientologists. . . . When we carry on an experiment, at some point—either the sending end or the receiving end—a major piece of the experiment is under control by people who don't have anything to do with Scientology."

"I once did an experiment with Pat and Russell in the room. Bart [Cox] wanted to check whether we [Puthoff and Price] were in collusion. So I went to Bart and he had his own secret technique of finding a place that I didn't know about. He said, 'Okay, come with me.' So we got in the car and he used some random traffic-pattern approach to end up at Redwood City Marina. When we

got back here, we listened to the tape Pat made. It was such an accurate description that actually I suddenly got paranoid. I thought maybe Bart and Pat were in collusion and maybe this had been set up as a test to see if I would catch them. So, actually, I understand the collusion aspect, because I'm paranoid in my own case. I guess the only way that you get around that is that, in all of our experiments, we shuffle around the people that are involved—both the subjects and the experimenters—in such a way as to prevent collusion."

Earle Jones, the lab director who immediately oversees Puthoff's and Targ's work, makes a logical and telling point. "If the situation comes down to where the only way we can explain our results is either the existence of some paranormal phenomena or collusion, then I feel comfortable. I'm that much involved to know what it would take to have collusion."

Suspensions of collusion aside, could the SRI program be an attempt by Scientologists to further their own cause by having legitimate scientists verify psychic abilities in practicing Scientologists? The situation is vaguely analogous to dispatching Christian wise men to verify the miracle of the loaves, or the raising of Lazarus. Is the SRI research nothing but an ad campaign to sell L. Ron Hubbard to the uncleared millions? Yes, shouts the devil theorist. But such an affirmative answer, while it cannot be definitively ruled out, is improbable and highly speculative. The involvement of a surprising number of Scientologists in SRI's psychic research probably can be accounted for best with the most obvious explanation: Scientologists strongly believe in the paranormal powers of the psyche; thus, they are drawn to experiments in these areas, perhaps as a means of verifying their own hard-won beliefs.

The worldwide futurist movement attracts many Scientologists, as does NASA. The type of Faustian person drawn to these areas generally is dedicated to technological change and cyberneticized philosophies. Often they develop such open-mindedness to all possible speculations that their brains begin to dribble out. Some have lost the ability to discriminate between good ideas and bad ideas, good science and bad science. But they are open to it all, trading on the intellectual martyrdom of a Giordano Bruno, a

THE SEARCH FOR SUPERMAN

Galileo Galilei, anxious to be part of the breakthrough into a new scientific paradigm. This openness to ideas is perfectly valid and necessary to an orderly assumption of new intellectual heights—as long as one's powers of discrimination and intellectual honesty remain vigilant. But the charge they are liable to (at SRI, anyway) is fuzziness of thought, not collusion.

Oh, yes, about those spiritual Thetans who pass from generation to generation in different guises. . . . Ingo Swann believes the Thetan inhabiting his present body was once the psychic adviser to an eighth-century European conqueror. Pat Price credits his reincarnated Thetan for having once sparked the fiery oratory of Patrick Henry. Hoova doesn't seem so far away now, does it?

That night, they told me that a certain scientist working on orthodox lines on ESP had been approached by his government, which wished to employ potential telepaths in espionage. And it was in the early sixties that the Russians were already talking about the use of astronauts with telepathic powers—legitimate, but what government was likely to stop at that?

. . . . Not only for their own sakes, but to protect others [people who perhaps did not know their own potentialities] from danger, they must keep quiet, work in silence, secrecy, and trust, to protect a developing human capacity from the wrong sort of attention.

—Doris Lessing, from *The Four-Gated City*

If anybody gets the idea that there is psychic warfare going on, I could get killed in the streets.

—Ingo Swann

THE POLITICS OF PSI

SUPPOSE THE SOVIET UNION HAD AN ALL-SEEING PSYCHIC who could read the mind of the president? They would have the ultimate intelligence source, a secret agent inside the brain of the chief executive, ferreting out governmental decisions on the most sensitive matters, perhaps even influencing those decisions. Such spooks really would be spooks, psychic spies who traveled out-of-body into top-secret White House conferences or the depths of the Pentagon Command Center.

Farfetched? I hope so.

"I had two men from the CIA come down and visit me," recalls Robert Van de Castle, the University of Virginia psychologist who was a member of ARPA's team that investigated Uri Geller. "One thing they wanted to know was if Geller could jam computers. But they were particularly interested in out-of-body [remote viewing] stuff. They were concerned that the Russians had developed it to such an extent that they were using it for intelligence monitoring."

The CIA's visit took place in 1972, about the time SRI's remote viewing experiments with Ingo Swann were in full swing. Van de Castle was impressed by how knowledgeable and up to date on parapsychology the two intelligence officers were. "They seemed to think that psychic intelligence gathering was not beyond the realm of possibility," continues the scientist, adding the caveat: "They gave more serious weight to that possibility than I would as a parapsychologist."

Perhaps they were just better informed—because the United States government is supporting between thirty to

forty classified projects in psychic research, according to an Atomic Energy Commission (AEC)* security officer whose job is to follow developments in paranormal research. The estimate seems extraordinarily high, perhaps calculated to provoke interest in a field that the security officer, Ron Robertson, takes quite seriously. But the fact that any "black money" from the clandestine services has gone to support psychic investigations is a revelation. "I do know there is considerably more activity going on than is made public," says Robertson ominously, "because of the applications."

A respected West Coast psychologist in a position to know reports that one such government study involves developing "sensory shielding" techniques to protect the president of the United States from having his mind read by a secret psychic spy. The example that begins this chapter is deadly serious.

Some of the secret psychic investigations are camouflaged by innocuous titles such as research into dreams, sleep, hypnosis, biofeedback, learning, cognition, biocybernetics, and other "legitimate" studies of man's mind. The Veteran's Administration laboratory of one well-known West Coast biofeedback scientist harbors highly intriguing psychic studies that are kept secret. Shortly after their visit to SRI, Robert Van de Castle was asked by his ARPA friend, George Lawrence, to submit a proposal for a psychic investigation to be conducted under the guise of sleep and dream research. More recently, Lawrence and ARPA have supported one-hundred-forty-five-thousand-dollars' worth of Kirlian photography evaluations by a small New York-based firm of psychologists.

Apparently impressed by SRI's original pilot studies, the Naval Electronics Systems Command has given Puthoff and Targ a forty-seven-thousand-dollar contract to help support a continuation of their remote viewing and electroencephalography work (more on this in Chapter 15). All echelons at SRI refuse to discuss the matter and urge the navy to do the same, even though the investigations

* The AEC has since been reorganized into two separate agencies. The functions for weapons development and security have been assumed by the Energy Research and Development Administration.

are unclassified. "I talked to someone today, I think it was Bart Cox, and he said they [SRI] didn't want the information out on this," reports a befuddled navy spokesman, caught unaware by SRI's penchant for secrecy. "Apparently they don't seem to understand the Freedom of Information Act."

"Some of the [government's] interest in psi ties into classified intelligence areas," explains AEC's Ron Robertson, "for example, the security of nuclear weapons." Lawrence Livermore Laboratory in California, where Robertson is assigned, is the primary nuclear weapons arsenal in this country, responsible for designing hydrogen warheads for ICBM's and other missiles. Part of the security officer's responsibility is to assure that those warheads cannot be sabotaged. Robertson seriously fears that a talented psychic might trigger a nuclear explosion or malfunction merely by force of mind. "All it takes is the ability to move one-eighth of an ounce a quarter of an inch at a distance of one foot," he warns.

Recall that the researchers at SRI believe that Uri Geller psychically moved a one-twentieth-ounce weight on their pan balance, slightly less than half the force Robertson believes sufficient to activate or disable the intricate firing mechanisms of a nuclear weapon. "If management at our place and at AEC in Washington didn't have reasonable interest in what I'm doing, I would have been short-stopped long ago," comments the security officer, implying his fears of potential psychic sabotage have official AEC sanction. Such fears are bolstered by reports that unexplained bomb explosions aboard navy carriers off Vietnam were the result of accidental psychic mishandling by the loading crews. The speculation is that the fuses might have been triggered by low-frequency magnetic or electromagnetic brain pulses. If such explosions are possible by accident, then the question is: Can a person with extraordinary psychic energies be trained deliberately to sabotage an intricate arming mechanism? It is a shuddering thought.

The dean of American parapsychology, J. B. Rhine, recently revealed that he conducted ESP tests for the army as far back as 1952. Rhine tried to train wardogs to sniff out buried land mines by using psychic senses as well as their noses. In secret trials along a beach north

of San Francisco, the dogs did uncover the hidden mines forty percent of the time—twice above chance, according to Dr. Rhine.

Extensive studies also have been conducted by the military to try to determine what qualities distinguish a successful "point man." This is the soldier who walks at the front of a squad as it quietly makes its way through a jungle trail. In his vulnerable spot at the head of a column, the "point man" generally finds the enemy first. Some soldiers are far better than others at sensing danger right around the next clump of trees. Why? Do they have better-developed extrasensory abilities? The army has pored over statistics from the Korean and Vietnam wars in an attempt to see if there is some unaccounted-for mechanism that triggers a successful "point man's" psychological alarm bell that keeps him from blundering into ambushes—in essence, operational ESP.

Dousing generally is thought of as a folklore technique used by backwoods farmers to find underground springs; folklore that is, until one sees it work successfully, as it does in many rural communities. Evidently the marine corps was impressed. After running tests on a mock Vietnam trail at their Quantico, Virginia, reservation in the late sixties, the marines experimented with dousers in Vietnam's mountainous I Corps west of Hue. Under battle conditions, armed with a forked stick or metal prong and alleged sensitivities, men were dispatched to hunt hidden North Vietnamese mines and tunnels, and they did so with some success.

"The government is involved in parapsychological research, but I cannot say to what degree," reveals Dr. Rhine. He adds that two requirements need to be settled before government interest can accelerate. "One would be a breakthrough that would enable us to show seventy percent effectiveness in ESP activity. The other would be an assurance that the public reaction would not be negative if it were found out that this sort of research was being paid for by the government." That was in 1972. The psychic experimenters at Stanford Research Institute maintain that the first condition has been met. The second remains in doubt.

Undoubtedly all the military services have maintained

some degree of quiet interest in paranormal possibilities. The navy certainly wants to know what makes a successful submarine skipper know how to avoid an unseen adversary, or whether such rumors of "sixth sense" judgments that helped to avoid a depth-charge run were in fact psychic intuitions. As this book was being written, navy psychologists attending a professional meeting acknowledged that they wanted to get Uri Geller into their own laboratories for intensive study, the only condition being that he allow a professional magician to observe him. Informally, the navy already has run tests on Geller. Eldon Byrd, an operations analyst at the Naval Ordnance Laboratory in Washington—"my job has been planning World War Three"—got Geller to try his metal-bending stunts under semicontrolled conditions at the laboratory. For the past three years Byrd has been attempting to duplicate the Baxter effect, hooking up electrical sensors to plants to determine if they react to the emotional state of others. Byrd is skeptical: "I can get a plant to respond about the same way I can get a piece of Styrofoam to respond." He maintains that the Baxter effect, if any, is caused largely by a person's own static, electrical field, not by any plant "consciousness." But the navy researcher is far more positive about Geller. Though Byrd's account is anecdotal, and the conditions under which he tested Geller were uncontrolled, the results are curious enough to be reported.

Through contacts at Isis—the same occult group that promoted Geller's appearance at Goddard Space Flight Center—Byrd got Geller to concentrate his alleged psychokinetic prowess on samples of a special nickel-titanium alloy called Nitinol. Developed at the Naval Ordnance Laboratory, this metal has most unusual properties. Nearly as hard as a diamond—a drill made from Nitinol has carved its way through cold rolled steel—the alloy also is nonmagnetic. But its most peculiar property is that any piece of Nitinol retains a "memory" of its original shape. Formed under high temperatures, the alloy can be bent and twisted, but, like the proverbial cat, it always will come back to its original shape once it is reheated.

Geller was handed a small, oblong piece of Nitinol, held it in his hand briefly, then disappointingly declared:

"I don't have a feeling for this material." End of round one.

Next, he was given a one-inch-long straight piece of Nitinol wire, about the thickness of pencil lead. Byrd held each end of the wire and swears that he never let go while Geller rolled the middle of the wire between the thumb and forefinger of his left hand. After about twenty seconds, the performer exclaimed, "Gee, it feels like there's a lump forming in the wire!" He took his fingers away, revealing a sharp, U-shaped kink in the wire where his fingers had been. Byrd and other onlookers were amazed. They put a match to the kink, fully expecting the Nitinol to resume its original shape. No luck. The kinked wire was held in boiling water. It started to return to its original shape, but as soon as it was removed from the water and cooled, it resumed its Geller-kink, an impossibility, insists the navy researcher. X-ray crystallographic analysis revealed an astonishing picture: The crystals in the kink "had definitely enlarged in size," reports Byrd. (Nitinol typically has a uniform crystal size.) The crystals outside of the kink remained as before; only the crystals in the area touched by Geller apparently had changed in size.

William Buehler, one of Nitinol's inventors, tried his best to destroy the kink. He placed it in a vacuum chamber and heated it red hot, in effect re-annealing the alloy. Finally it resumed its straight shape. The navy scientists again were at peace with their understanding of their beloved Nitinol. "We placed the wire on a long table," recalls Byrd, "and it was straight as a poker—until it cooled to room temperature. Then the kink came back." Navy metallurgists are at a loss to account for the obstinate Geller-kink. "There is no possibility of trickery," insists Byrd. Even Martin Gardner's nimble mind fails to suggest how Geller may have conjured this effect. But did Byrd inscribe an identifying number or marking onto the wire before handing it to Geller? How did he ensure that the showman did not substitute his piece of wire—containing a different memory—for the one he was given to work with? Impossible, argue Geller's devout believers. The rare Nitinol only is available from the navy. That is wrong. At the time Geller was tested, anyone could

order six pieces of the "metal with a memory" from a popular scientific catalog. Add another dollar and the firm would deliver a ninety-six-page NASA book explaining the marvelous properties of this unique alloy. Nitinol also is available commercially from a firm in Ohio. All Geller had to do was come prepared with at least one piece of his own Nitinol ready to be substituted for a navy one, one of the easiest tricks in the business. The substituted piece would account for the different memory and the difference in crystal size. All Geller had to know in advance was the size and shape of at least one sample he was to handle. Such inference proves nothing, except the fact that such possibilities of trickery have to be eliminated completely before even considering the possibility of paranormal happenings. Yet the navy group believes that the controls were sufficient enough to consider Geller's feat paranormal, and the kinked wire was shipped to Lawrence Livermore Laboratory for scrutiny by a battery of special instruments.

The current excitement over psi at Lawrence Livermore "seems to be paralleling the activity we had here when lasers were just getting started," reports Ron Robertson. Twice, Geller has been brought to Livermore for experiments conducted by Robertson, physicist Ron Hawke, and others. To avoid embarrassment to the government, the actual demonstrations took place in rooms owned by the University of California, which are contiguous to the AEC property. Though most of the results have been kept secret, an official AEC spokesman confirms one unaccounted-for occurrence: Geller wiped out the memory of a tiny integrated circuit. Aha! sneer the magicians; Uri had a concealed magnet on him that would have done the trick. But the physicists at Livermore report that the pattern of magnetic wipeout resembled the type that could be achieved only by using an *alternating* magnetic or electromagnetic field, not the *direct* field signature that would have been left had Geller used a concealed bar magnet. From such sketchy details it is hard to draw a firm conclusion. Adding to the puzzlement, however, is the fact that security officer Robertson—an ex-cop—searched Geller prior to the experiment. "When I pat down someone, they know they've been searched," says Robertson, assured

that Geller carried no special devices into the experiment room. Robertson stands convinced of Geller's psychokinetic powers, a judgment that continues the mystery of this confessed magician. "Anyone deeply into theoretical physics has no grounds whatsoever for rejecting the possibility of psi," argues Robertson.

That goes for space scientists as well.

In the early 1960s, on a Paris podium shared with cosmonaut Uri Gagarin, NASA's Eugene Konecci told an audience at the Fourteenth International Astronomical Congress that research into "psychophysiological phenomena" was a worthy undertaking. Dr. Konecci, one of NASA's early visionaries, reported on Soviet efforts to explore "a highly interesting problem in modern science—the nature and essence of certain phenomena of electromagnetic communication between living organisms. . . ." Such research, according to Konecci, ". . . is reportedly being pursued with top priority under the Soviet-manned space program." Development of psi communications systems might provide advanced emergency techniques or might aid in developing astronaut sensor systems, said the NASA executive, adding that the space agency was then conducting an important study into advanced methods of obtaining information about an astronaut's physical and psychological well-being using nonattached sensors.

By comparison, reported Konecci, the Soviet Academy of Sciences had established ". . . at least eight known research centers specializing in the phenomena of energy transfer—all on an academic-scientific level." Soviet goals? Establishment of a "thought register," "electronic hypnotizer," and "thought transference over distance." Konecci predicted: "If the results of conducted experiments are half as good as some people claim, then they may be the first to put a human thought in orbit or achieve mind-to-mind communication with humans on the moon."

This was no flaky sci-fi writer addressing some obscure parapsychology gathering, but the director of human resources and biotechnology for NASA speaking to his peers. Picking up an idea suggested by Andrija Puharich, Konecci even proposed formal "energy transfer" experiments from manned orbiting laboratories, experiments that Edgar Mitchell tried years later during his moon

flight. Konecci flatly declared that psychic phenomena "does exist in nature," and he called for new, quantitative approaches to understanding the problem long relegated to the fringes of establishment science: "The precision and authenticity with which each researcher, wherever he may be, carries out his experimentation will determine the success of research with respect to the formulation of laws for energy transfer, general information theory, telergic power, and action-at-a-distance on material systems." A few years after that remarkable lobbying effort, Konecci still had not received funding to pursue such adventurous goals. He left NASA to join the University of Texas faculty where he assumed three separate professorships.

But Konecci was not the only government bureaucrat willing to risk his reputation in defense of an open-minded approach to psi research. The same year he revealed his candid hopes in Paris, scientists at the air force's Cambridge Research Laboratories outside Boston concluded a lengthy study of ESP testing. Their announced purpose was not so much to prove or disprove psychic phenomena, but to develop a strict experimental protocol that others might follow, using a specially designed ESP testing machine named the VERITAC.

The air force research team consisted of a psychologist, an electronics engineer, a physicist (with a background in statistics), and a mathematician—a versatile group that was able to bring varied disciplines to bear on the complicated task. Their report, which is commendable for its objectivity, contains summaries of 55,000 responses to random numbers generated by the VERITAC machine. Thirty-seven girls from Endicott Junior College were tested to determine both clairvoyant and precognitive abilities; no extra-chance, psychic effects were discovered. But the primary finding of the study concerned the rigor with which the statistics for any psi research must be handled. Too often, chided the air force team, parapsychologists toss out any experiment that does not contain "significant" results. Their negative findings, however, did not preclude the VERITAC team's urging others to attempt further experiments.

But few in government did, at least openly.

A few years back the National Institute of Mental Health (NIMH) sponsored a seventy-five-hundred-dollar Washington University precognition study, which fizzled. More recently, NIMH funded Montague Ullman's tests at the Dream Research Laboratory of Maimonides Medical Center in Brooklyn, a two-year, fifty-two-thousand-dollar attempt to send mental messages to sleeping subjects. That project, too, is winding down in this era of tight research money, having produced some intriguing leads that should be followed up. Most significantly, the National Science Foundation (NSF) is funding a joint forty-thousand-dollar project with the University of North Carolina and Duke University to write a scientific history of parapsychology. It is customary in science, before beginning a new avenue of research, to review all previous work in the field. The fact that the prestigious NSF is committing funds to catalog all of psychic research to date is a strong indication that it soon may support original psi research; but as of now that remains conjecture.

Howard Zimmerman, a planner at the Department of Health, Education, and Welfare (HEW) who follows the psi field, feels "that something authentic is going on there that we don't understand yet. My gut feeling is that there is a field of fool's gold out there with some true nuggets. It's a shame more hasn't been done in the area. It's clear humankind is operating only on a limited potential." The problem most of these middle-level bureaucrats face is that their bosses look upon paranormal research as something fit only for kooks. Funding requests invariably get batted down in the middle echelons of the Washington labyrinths. But it is difficult to blame the nay-sayers. Most of the people asking for psi funding are not first-rate scientists—the first-raters are too concerned about their establishment reputations to risk such potentially quixotic challenges.

The projects cited above are the only government-funded ones of which Zimmerman says he is aware. But the HEW official adds an intriguing caveat: "There may be others buried in the DOD [Department of Defense] budget." If AEC security officer Ron Robertson is correct, there may be as many as forty others.

Ten years after Eugene Konecci's Paris speech, NASA

finally mustered the courage to fund its first research into psychic phenomena.

In May, 1972, a top-level conference of NASA chiefs converged on the plush St. Simons Island resort in Georgia to consider the future of far-out, speculative technologies. At the suggestion of science fiction writer Arthur C. Clarke, conference planners decided to include a session on psychic phenomena. Arthur Reetz, a physicist concerned with advanced concepts and missions for NASA, contacted Mike Murphy at Esalen Institute, then the West Coast's hub of fringe ideas. Murphy put Reetz in contact with Edgar Mitchell, Stanford's William Tiller, and SRI's Russell Targ, all of whom eventually appeared at the St. Simons conference. In order to keep the controversial subject as low key as possible, NASA planners kept the topic off the main agenda and scheduled instead an "informal discussion" on psychic phenomena at which attendance was not obligatory—even wives could come. The meeting room was packed.

Mitchell presented a philosophic overview; Tiller spoke about some of the work the Soviets were engaged in, and Targ described his ESP teaching machine. The NASA bigwigs were enthralled, voting to continue the discussions past the time to begin a scheduled luau. When NASA officials opt to work rather than drink, they must be interested. Rocket pioneer Wernher von Braun, then head of all advanced planning for NASA, was the most enthusiastic, openly advocating the agency's involvement in psychic research. "Even if you can't get official approval," he told Reetz, "surely you can find some way to bootleg this. We would never have built our rocket systems if we had had to have approval for everything." (Three years later astronaut Mitchell's Institute of Noetic Sciences established a "Chair for the Study of Consciousness in the Physical Sciences" in honor of von Braun.)

"I was surprised there was so little skepticism among NASA's top management," admits Reetz. Bureaucratic conservatism did reassert itself when NASA administrator James Fletcher passed the order that any references to psychic research be deleted from the official transcript of the St. Simons conference. Nevertheless, Reetz returned to Washington to explore methods by which psi research

might be supported, including the possibility of an inter-agency joint project co-mingling funds from NASA, HEW, DOD, CIA, and other interested parties. Even though the NASA planner had been encouraged to fund some proposals submitted by the SRI researchers, Reetz's bosses emphasized that any parapsychological project was to be buried outside of NASA headquarters and obscured from public view. The possibility of hiding behind the Central Intelligence Agency's voluminous cloak, using the device of an inter-agency transfer of funds from NASA to CIA, was explored, apparently without success. The head of NASA's Ames Research Center, in Reetz's words "a gold-plated skeptic," was extremely reluctant to oversee any psi project. Finally, Reetz obtained a grudging willingness from some of his contacts at NASA's Jet Propulsion Laboratory (JPL)* in Pasadena, California, to look at a proposal from SRI. After a full-blown presentation by Hal Puthoff and Russ Targ at NASA headquarters in the winter of 1973, the decision was made to go ahead with a one-year, eighty-thousand-dollar contract supporting psychic electroencephalography (EEG) and ESP teaching-machine investigations. JPL was to administer it. NASA's contract with SRI, which recently expired, was the largest single grant to support psychic research ever signed by an agency of the United States government—the largest ever talked about, that is.

Intelligence services traditionally have been deeply interested in the paranormal. John Dee, court astrologer to Queen Elizabeth I, mystic, alchemist, and agent of the English Secret Service, is one of the earliest examples. Dee toured the Continent, passing back secret information in coded, occult phraseology, based on the cipher writings of Trithemius. Holding seance-like "angelic conversations" for European royalty, Dee gleaned useful information from his high-placed hosts while he muddled their own intelligence collection by passing them misleading tidbits of "black propaganda." For example, at crystal-gazing sessions with Emperor Rudolph of Bohemia and King Stephen

* JPL is managed by California Institute of Technology, perhaps the single most prestigious center of scientific learning in the country.

of Poland, Dee's mysterious precognition warned of impending "... freak storms that would cause the fall of a mighty empire in 1588," according to Richard Deacon's account in *A History of the British Secret Service*. Emperor Rudolph swallowed the story whole and ensured that Spain, then preparing its historic armada, was warned. About the same time, almanacs prophesying violent tempests were published throughout Europe, continues Deacon's account. Whether they were legitimate or not remains unknown. But because of these ominous, psychic omens, Spanish sailors deserted in droves. Partly because of Dee's successes at psi war, the mighty Spanish armada delayed its sailing, only to encounter the disastrous storms he had predicted.

Deacon writes that the British Secret Service developed a reputation for supernatural powers during World War I, in which the Axis apparently believed the service's successes only could be accomplished by the occult powers of telepathy and clairvoyance. Later German infatuation with paranormal beliefs, particularly astrology, was utilized by the Secret Service in several propaganda schemes during World War II. Hitler had his own astrologer; Goebbels had a department of astrology, metapsychology, and occultism inside his propaganda ministry. Both sides distributed horoscopes favorable to their own interests, but Britain's early lead in psi warfare was never challenged by the Nazis. Ian Fleming, then a British naval intelligence officer and later famous for his James Bond novels, concocted a scheme to lure Nazi leader Rudolf Hess to England by using baited astrology. Meticulously duplicating the kind of occult information regularly being passed to Hess, Fleming's contacts fed Germany's number-two man a false horoscope, leading him to believe that the time was ripe to initiate secret peace talks. Planted information from other sources heightened Hess's belief in the tainted prophecy. The plan worked, with Hess parachuting into Scotland on May 10, 1941, the date his false astrological forecasts decreed as being a particularly opportune time for a peace-making mission.

More recently, American advisers discovered to their bewilderment that both the North and South Vietnamese relied on soothsayers to help plan their strategy and psyche

out their enemies. Even South Vietnam President Nguyen Van Thieu consulted with his favorite astrologer during the course of the war and reportedly delayed the beginning of the Paris peace talks until "the planets were favorable."

With precedents such as these, it should come as no surprise that the Central Intelligence Agency has its psychologists prowling parapsychology meetings and research groups, inquiring about the latest psychic happenings. "It's perfectly plausible that the agency would support this kind of research," says Victor Marchetti, a former top CIA official and co-author of a recent book on the agency. "That's the name of the game in research and development in intelligence—to try to go beyond the state of the art. There are always a lot of failures. But it's perfectly reasonable that people would be experimenting in that, maybe to get one step beyond." Several CIA officers do follow the psychic research at SRI with close interest. One of them, a psychologist deep within the clandestine Operations Technology Division, who witnessed some of Puthoff's and Targ's experiments, confided that he would be willing to sponsor some of the work there, but that he did not have the funds to spend. But that was a few budgets back.

A high-ranking navy scientist who has "supported some of these [psychic] investigations in the past," and has been briefed by the SRI team, lends even more credibility to suspicions that SRI's experiments in heresy were undertaken at the request of, and sponsored by, the United States government. "I think it was one of the intelligence agencies," recalls the navy scientist, "probably CIA."

The ultimate weapon in intelligence is the ability to know what others are thinking; in effect, psychic ability. Recent advances in the measurement of magnetic and electrical signals broadcast by humans have prompted dark hopes of reading a person's thoughts with sophisticated electronics. For example, scientists now can monitor the changes in a person's electrical brain waves (EEG) without pasting electrodes to his scalp, and they can remotely measure fluctuations in magnetic fields produced by the brain. This capability of remote physiological sensing has been carried even further by navy researchers who have built a special room in which a person's EEG, blood pres-

sure, EKG, temperature, and skin conductivity all can be recorded remotely, without attachments. These are many of the same measurements taken in a polygraph examination. It is thus becoming possible—in the laboratory, at least—to conduct a lie-detection exam without the person's knowledge. That comes frighteningly close to reading a person's thoughts. But there is more. One noted brain researcher was approached by a Central Intelligence Agency official and asked quite seriously if remote EEG sensing could pick up the electrical signals generated when a person thinks to himself; in effect, technological mind-reading.

A former high-ranking CIA executive recently told *The Washington Post*: "What technology doesn't do, won't do, and can't do is tell you what people are thinking and what their plans are. We can't read minds with technology, but that's our business—reading minds. The whole purpose of espionage is to find out what people are thinking and doing."

Intelligence analysts in this country are particularly concerned with what the Soviets are thinking and doing about parapsychology. With good reason. As long ago as 1924 an official Soviet Committee for Psychical Research was established at the Leningrad Institute for Brain Research. There, extensive investigations of telepathic suggestion at a distance were carried out. Subjects would come to the lab and take a seat, unaware of what kind of experiment they were to participate in. An experimenter, secluded nearby in a lead-lined room, would concentrate on the subject, reportedly willing him to sleep by visualizing the subject sleeping. Within two or three minutes the subject would fall asleep, responding to the telepathic trance effort. On one occasion the subject was waltzing around the room when she fell into a stupor at the telepath's command. Later, the subjects would be awakened by the same telepathic method. This pioneering research was discontinued in the early 1930s, after hundreds of reportedly successful tests. The materialistic dogma of Marxist-Leninist policy hardened, charging that parapsychology represented mystical superstition and therefore was antisocial and antistate. (Such criticisms are echoed in the charges leveled by many

contemporary debunkers in this country.) Ironically, in the latter part of the 1950s the Soviet attitude shifted in response to a story in a French journal—probably apocryphal, possibly planted—that the United States atomic submarine *Nautilus* had conducted successful ship-to-shore telepathy from deep underwater locations. Military minds think alike, so the lid came off Soviet parapsychology. The result was that Leonid Vasilev was allowed to publish a summary of those thirty-year-old telepathy experiments that he had helped to conduct. A distinguished physiologist and holder of the Order of Lenin, Vasilev also reopened a psychic research group at the brain institute in Leningrad. During the decade-long thaw in Soviet policy that followed, several important psi experiments were reported, and there was extensive contact between the Russian researchers and those in the West. Not surprisingly, this relaxed attitude toward parapsychology paralleled a similar policy shift toward the previously shunned field of cybernetics, and today much of the Soviet work in psychic phenomena falls under the category of "bio-information," a subcategory of bionic/cybernetic research.

Russians claim to have transmitted coded telepathic messages from Moscow to Leningrad, knocked a man down with a telepathic whammy, intercepted telepathic messages between two parties, identified EEG correlates with psychic reception, even levitated the equivalent of about half a pound. Sheila Ostrander and Lynn Schroeder, in their book entitled *Psychic Discoveries Behind the Iron Curtain*, state categorically that the Soviets are pursuing psychic research with clandestine use as their goal. "There are reports of several military institutes where ESP research is being done in the U.S.S.R.," they write. "We have seen confidential Western reports on Soviet attempts to train clairvoyants for spy purposes."

About the time the Ostrander/Schroeder book was published in 1970, the Soviets withdrew from open discussions of psychic research. Experts in this country suggest that the current shroud of secrecy may be further evidence of Soviet intent to utilize paranormal powers for clandestine purposes; or perhaps their researchers have scored a breakthrough in reliability and accuracy that they wish to conceal from the world. Participants at the 1973 Conference

THE SEARCH FOR SUPERMAN

on Psychotronic Research in Prague were surprised to find that the scheduled three-man Soviet delegation had been replaced by unknowns who spent their time grilling attendees with identical questions about the status of psychic research elsewhere in the world. According to one reliable report, one of the Soviet stand-ins was a top KGB official.

Then came details of the crackdown. In 1974, one of the Soviet Union's more celebrated psychic researchers, Eduard Naumov, was sentenced to two years in a labor camp, allegedly for taking money for lecturing without permission. But the real reason probably was that Naumov was too friendly with his Western counterparts, too free in his exchange of information. Another noted parapsychologist, Larissa Vilenskaya, visited Naumov in prison, and two weeks later was herself arrested. Others are reported either to have been jailed or dismissed from their research posts, supposedly reflecting a new clamping-down attitude by the Soviets toward parapsychology and a return to the days when such investigations—like cybernetics, quantum mechanics, and the theory of relativity—were considered nothing but superstition and idealistic mysticism. Or, perhaps the Soviets have scored a psychic breakthrough and want to hide it by forbidding further discussion with foreigners. It probably will take a psychic to discover the truth.

Most parapsychologists I have talked with believe that their work should be open and unclassified, untainted by the strictures of clandestine government applications. The thought of psychic warfare frightens people like Edgar Mitchell, who says he hopes to keep all his activities beyond the reach of so-called "black money." Yet Mitchell will not deny persistent rumors that part of the Puthoff and Targ psi project is financed by money either from the CIA or the military. Puthoff once worked for the super-secret National Security Agency, and it would be quite natural for them to back some of his work. "That would not surprise me," says Mitchell. "But it upsets me somewhat, because all of us in the field have agreed that we would not work on 'black projects.'" Mitchell himself has declined such government overtures, he says. But, as for SRI, "I have strong, strong feelings that they are involved in something like that."

But in a flash of terrible light all our explanations, all our classifications and derivations, our etiologies suddenly appeared to me like a thin net. That great passive monster, reality, was no longer dead, easy to handle. It was full of a mysterious vigor, new forms, new possibilities. The net was nothing; reality burst through it.

—John Fowles, from *The Magus*

FIFTEEN

THE LEFT-HANDED CONSPIRACY

IS IT SO OUTRAGEOUS TO SUGGEST THAT THE TOP OF THE evolutionary ladder, *Homo sapiens*, might have undiscovered modes of sensing? Many lesser forms of life make use of senses that humans do not claim for themselves. Could it be that man merely has turned them off as he has evolved? Telepathy may have been a useful attribute for prehistoric bushmen on the hunt—as it reportedly is for twentieth-century Australian aborigines. But the advent of culture, language, and consensus reality—resulting in later development of technological communication—may have forced such senses out of mainstream evolution. Or, perhaps these weaker perceptions merely lay dormant, shunted by unknown valves of the mind, filtered out before reaching our consciousness.

A certain species of female moth silently lures swains from miles around to join her in a soft summer's eve of mating. How does she do it? One theory is that she emits a powerful odor, a mothy musk. But the males sometimes are attracted upwind from the female. Can such smells travel against the breeze? More recent evidence suggests that the female moth transmits an electromagnetic call in the eight-to-fourteen-micron infrared range of the spectrum, using a spiny array on her tiny antennae. Biologists have shown that these spines act as perfect miniature aeriels. At their base is a waxy substance ideal to shape an infrared wave guide, the biologic equivalent of an electronic device that concentrates electromagnetic emissions.

Certain strangely punctual moths also migrate twice a year, always within a day or two of October 28 and February 5. Curiously, these migrations coincide with the ar-

rival of a low-pressure cold front some fifteen to thirty hours after the moths start their trek. Scientists recently have come to the conclusion that the exodus is triggered by changes in ion concentrations in the atmosphere that accompany such storm fronts. In other words, not only are moths believed to communicate among themselves with miniature "brain radios"; they also can sense the changing ratios of positive to negative ions in the atmosphere. Try that one, Mr. Magician.

Some South American fresh-water fish even tune in to the world with their own "brain radars." One side of Dr. Theodore Bullock's office at Scripps Institution of Oceanography shines wall-to-wall with the Day-Glo green luminescence of bubbling aquariums. The center tank holds a black striped Amazonian fish about six inches long with streamlined head and pointed tail. Cautiously, he swims backward, literally "seeing" the world through his tail, which emits an electric field of three hundred Hertz (cycles per second) alternating current. Don't believe it? Bullock dips a pointer-like pickup into the aquarium. "Hummmmmmmmm" goes the sound amplifier, in a tone slightly above middle C. "That's the fish," exclaims Bullock. Waving his long, thin tail like an electric wand, the fish detects objects that come within his field by changes they produce on his tail radar signal. But if another electric fish swims within close range, their two fields jam each other, much like two radio stations transmitting on the same frequency. Automatically the two fish shift their frequencies just a few Hertz to avoid such a Piscean social disgrace. One shifts up in frequency; the other shifts down. But the marvelous mystery is: How does each know which way to shift?

The receptors for these low-frequency signals are located at several patches along the skin of the fish. Incredibly sensitive, they can detect as little as two-tenths of a cycle difference in another fish's frequency. The Russian, N. Saradzhiev, reports that these peculiar fish can sense charges as minuscule as three billionths of a volt per square millimeter, which results in a current one hundred thousand times less than that required to stimulate a single nerve fiber.

Scientists at Scripps have identified several electrical behavioral patterns of these field-conscious fish, including ag-

gression, submission, and reproduction. For example, prior to attacking, the fish goes silent for a split second ["like growling," says Bullock], then continues emitting its electric signal. But if the fish goes off the air for a longer time—one or two seconds—it indicates submission to the other fish, a kind of microelectrical sigh.

This new class of sense organs is not known to exist in any other animals except fish. Catfish and sharks, though they cannot emit electric signals, do receive them. Sharks have exquisitely sensitive detectors that are able to sense the electric field of prey in the inky depths up to eighteen inches or more away. They use this sense, Bullock believes, as accurate terminal guidance to home in on their meal. The Scripps scientist also says that sharks use their electric sensing to navigate complex currents like the constantly eddying Gulf Stream. As they swim through the earth's magnetic field, the sharks induce a direct electric current that varies as the magnetic field varies. Sensing such changes, sharks, in effect, make use of their own built-in magnetic compasses.

It is well known that porpoises (bottle-nosed dolphin) and bats are born with ultrasonic radar systems that emit sounds ten times higher than the highest note man can consciously hear. Owls—which feed on the bats, and moths, which the bats feed on—both have ears to hear these high-pitched squeaks. At the other end of the scale, the ordinary jellyfish "hears" low-frequency vibrations well below the known human threshold. Such vibrations travel easily through water and can occur ten to fifteen hours before the onset of a gale. Russian researchers have suggested building electronic devices that mimic the jellyfish's ability in order to "hear" low-rumbling storms before they hit.

Pigeons sense the sun's polarized light, which is believed to help them navigate even on cloudy days; rats have been trained to smell schizophrenics; snails and ants are sensitive to radioactive emissions; bees' eyes see into the ultraviolet; cockroach eyes detect infrared rays; even lowly bacteria recently have been found to migrate along lines of magnetic force.

Perhaps the most curious "creature" of all these super-sensing life forms is not even an animal, but a micro-sized stalk of fungus called *Phycomyces*, sensitive to at least four

different stimuli: gravity, light, stretch, and an unknown stimulus that enables it to avoid solid objects. Yet these relatively sophisticated sensors reside in a straw-sized stalk with a round ball at its head—all of which is a single (albeit gigantic) cell.

The spore of this peculiar fungus can lie dormant for years before encountering the proper temperature and other conditions ripe for its springing to life. Frequently its birth occurs deep within a clod of barnyard feces, yet even in this dank, dark interior the nascent fungus senses gravity and begins to grow upward. If placed horizontally, the growing stalk will turn up, against the tug of gravity, even though it has no recognizable gravity sensors (statoliths) like humans have in their inner ears. The *Phycomyces* also grows toward light. Though it has no obvious eyes with which to "see," the fungus can sense a broad range of light intensities, roughly equivalent to that perceived by human eyes. Just a few quanta of light are sufficient, a "vision" sensitivity dictated only by the quantum noise level. (Intriguing Soviet reports of humans who "read" colors through their fingers might be reconsidered in light of *Phycomyces'* eyeless "vision.")

The single-celled *Phycomyces*—which can grow as tall as four inches—also will bend away from a force pressed against its stalk, as well as alter its growing rate when pressures at either end are applied to it. In effect, it has a primitive sense of touch.

However, the most unusual attribute of this extraordinary life form is its ability to sense obstacles placed in its path. When anything—wood, glass, plastic, metal, even a human hair—is put within about an inch of its head, the *Phycomyces* proceeds to detour around it. For over a hundred years this avoidance response has been scrutinized, but still nobody knows how this atavistic spore senses that something is in its way and responds by growing around it. Some, like Max Delbrück, a Nobel Prize-winning molecular biologist, suggest that the *Phycomyces* may use a gas radar to sense its surroundings. The fungus would emit a diffuse chemical fog, which upon encountering a solid obstacle increases in concentration, thereby signifying to the fungus that a detour is necessary. Maybe minute temperature or humidity differences are sensed. Or, perhaps, like the

Amazonian electric fish, the *Phycomyces* detects changes in a weak electric field that surrounds it, and is altered by any encroachment. Whatever strange mechanism is at work, it is not known to reside in man; at least, it has yet to be detected. But if a simple single-cell fungus has sensory mechanisms beyond the range of man's known senses, who is to say that some hitherto undetected subliminal influences do not come into play in the integration of all the signals bombarding nature's highest-known form of life?

If a stranger came up to you in the street one day and began to babble about forces that had charm and strangeness, particles of psi, and massless "strings" whose ends rotate at the speed of light through twenty-five dimensions of space with mythical quarks attached to them, you'd declare him bonkers and walk away. Chances are, however, the stranger would be a recent Nobel Prize-winning particle physicist discussing the latest theories of unseen reality. All these mind-rattling concepts are common talk at institutions around the world where the base constituents of matter are being probed.

For example, imagine a burst of electrons fired near speeds of light at a powerful oncoming flash from a laser beam. This unique head-on collision of matter with light recently created the shortest-lived particle known to man. It took three and one-half years and a Herculean search through two million bubble-chamber photographs of the experiment to uncover the rho prime meson—a sub-nuclear particle that vanishes almost before it begins, in a millionth of a billionth of a billionth of a second. Understandably, the team of Stanford and Berkeley physicists never saw their discovery—they only infer its existence from the nuclear spore it left behind. One of the experimenters, at a loss to account for a complicated addition of mass to the particle, even suggests that "the rho primes had mass breathed into them." The metaphor recalls Plato's reflection that mankind holds two contrary philosophic views of nature: the belief that matter gave rise to mind; and the belief that mind gave rise to matter. The first view is uniquely Western and post-Copernican, a belief in a mechanistic, clockwork universe. The second view, that mind came first, still is common to most of the non-Western

world, largely untouched by Faustian science. Yet it is this second world view, of spirit over matter, that the Western physicist uncharacteristically calls upon in his metaphor. This basic issue seems far from settled.

Why, then, does the debate over psychic possibilities raise such a noisy barrage of skepticism? Surely the search for psi seems no more ghostly than the search for the rho prime. The answer seems to be that most Westerners base their unshakable concepts of nature on a "common sense" Newtonian understanding of the universe, supremely causal, and susceptible to ordering, a world view they deem "rational." At best, they are fifty years outdated. Their "common sense" understanding of the universe has been totally inundated by the advances of quantum physics and relativity. At the atomic levels—the microlimits of reality—nature simply does not exist in the everyday common-sense domains of space, time, and determinism. Subatomic particles like the rho prime are neither points of matter like most of us conceptualize, or packets of energetic waves—but both, simultaneously. In this Lilliputian domain ordinary concepts of size, shape, force, and composition simply lose most of their meaning. The "rest mass" of some particles is considered to be "imaginary," yet it is chalked up daily on physicists' blackboards. The positron (an electron with a positive electric charge) is believed to move backward in time, however briefly. Quarks, gluons, gravitons, tacyons, and a host of other as yet undiscovered particles have been theorized, each one more bizarre in terms of our common-sense perceptions of nature. Some scientists even suggest that a bridge will be found directly linking today's particle physics to the understanding of tomorrow's human consciousness, including the phenomenon of psi. Just recently, physicists at Brookhaven National Laboratory and Stanford University uncovered a startling new bit of matter about three times as massive as the proton. Seldom within the last ten years have particle physicists been thrown into such excitement. Two predictions are forecast for the heralded new particle: one, either it will provide the long-sought missing link that ultimately unifies the present jungle of elementary particle theories; two, decades of painstaking theoretical work and several Nobel prizes will go out the window, chased from legitimacy by the new particle.

Ironically (since there is apparently nothing to connect it with parapsychology except its controversy) the particle is named Ψ (psi).

One of the most common objections lodged against the reports of psychic events is that they are "too weird" to be true. Reading other people's minds, sensing a covered drawing, viewing remote scenes, and bending metal spoons cannot be possible, runs the argument, because such events do not correspond to common sense, "rational" perceptions; "therefore, they cannot be true." Arguments based on emotion such as these are arrogantly specious. For not only does such a naïve refutation deny the possibility that paranormal happenings just might be fact; it also denies most of the major advances in science. Galileo found it almost impossible to coax his intellectual contemporaries to cross the boundary of their emotional prejudices and simply take one look through his telescope. The perfect heavens could not possibly be marred, his opponents argued; therefore, there was no reason to accept Galileo's invitation to view the moon, which he claimed was cratered, and therefore imperfect. "What folly!" they sneered. What folly, indeed.

The "strangeness" factor of today's science has taken another conceptual leap with cosmological "black holes"—the ultimate result of gravitational collapse of a star or star system into a fantastically dense object. Because of its density, and thus, intense gravitational attraction, even light cannot escape the crushing pull of a black hole's gravity. Like some voracious cosmic vacuum cleaner, a black hole would gobble up any nearby star, swallowing it down, transforming its matter into pure energy. Man's laws of physics turn to dust inside the black hole; even the concept of time becomes meaningless. The entire universe, some theorists suggest, may be one tremendous black hole, or perhaps numerous black-hole universes are packed as tightly as galactic sardines within our own universe, each invisible to the other. One serious speculation holds that matter swallowed down a black hole might surface elsewhere in "white hole" matterfalls, perhaps as unexplainably energetic nuclei of galaxies in other dimensions of space and time.

As if these concepts were not enough to send the average

Newtonian thinker tumbling down a rabbit hole, Princeton's John Wheeler heightens the Alice-in-Wonderland reality by marrying the subworld of quantum mechanics with the galactic-scaled theories of general relativity. The result is an even further step away from our common-sense, causal view of nature. Not many years ago, several Nobel Prizes were awarded for the concept of a fluctuating, never-quiescent electromagnetic field transmitting radiation across empty space, a force that pervades all space. By inference, argues Wheeler, the space that transmits gravitation must also be fluctuating, foamy as the breaking waves in a Hokusai Japanese print. The common-sense mind repulses such a supposition, yet that is Wheeler's conception of the ultimate reality that surrounds us. The stage on which this fluctuating, foamlike space plays its role, he says, is "super-space," an arena beyond normal concepts of space and time, endowed with an infinite number of dimensions, where any single point represents an entire three-dimensional world, and the concept of time is meaningless. Mind-boggling? Yes, but part and parcel of today's speculative science.

In the fall of 1974 SRI's Harold Puthoff and three friends drove to a gambling casino at Lake Tahoe to test an operational strategy in precognition. All four voted in advance on the turn of a roulette wheel, each judging whether the ball would stop on a red or a black number on a predetermined spin. Through a complex method of tallying the predictions—which sometimes required as many as one hundred fifty separate votes—the SRI team arrived at a list of reds and blacks they collectively forecast would occur. But it was not without some trepidation that the group left their hotel room and headed to the roulette wheel to wait for the agreed-upon benchmark, the first turn of a double zero. Twenty minutes passed before Puthoff could place the first bet. "It shows you how much faith I have in paranormal phenomena," laughs the SRI scientist. "I only bet five dollars at a time." Yet several turns of the wheel later, the SRI precognators walked away hundred-dollar winners.

Columbia University physicist Gerald Feinberg, at a select conference on "Quantum Physics and Parapsychol-

ogy" held in Geneva recently, expressed the view that modern physics, "instead of forbidding precognition from happening, has sufficient symmetry to suggest that phenomena akin to precognition should occur." He explained that there are two solutions to the equation describing how light propagates: one is termed the retarded potential; the other is called the advanced potential. The retarded potential is the common-sense solution, since it implies that one first has to turn on a light before the light shines. It is called "retarded" because of the delay incurred in the finite speed of light and is the solution commonly accepted. But the equation has an equally true solution in the advanced potential. This counter-intuitive solution means that light radiates into space *before* the light is switched on. Feinberg believes that precognitive information might in fact be a continuing occurrence analogous to the advanced potential. Like the 10-Hz Schuman resonances and other weak stimuli, the advanced potential—only under rare circumstances—may surface into man's conscious perception, giving rise to precognitive feelings.

Quantum physics' view of reality presents a famous thought experiment that parapsychologists are fond of citing, known as Schrödinger's paradox (after the distinguished physicist Erwin Schrödinger). A cat is trapped inside a room with a Geiger counter, a hammer, and a flask of cyanide poison gas. The Geiger counter holds a trace of radioactive material, just enough so that there is a fifty-percent chance that one of its nuclei will decay in one hour, triggering the counter, which in turn releases the hammer, which breaks the flask, releasing the poison, which kills the cat—maybe. (It makes you think that Rube Goldberg should have been a physicist.) After an hour has elapsed, one scientist asks another: "Without peeking inside the room, can you tell me if the cat is dead or alive?"

"Obviously," harrumphs the classically trained physicist, "the poor beast is dead by now."

But the physicist trained in quantum mechanics objects: "Not at all. The cat is exactly one-half dead and one-half alive. The equations demand nothing less." If you think that such a schizophrenic state makes the cat unhappy, you should see the physicists who have to grapple with such bizarre concepts of reality.

One theoretical experiment that corresponds to this paradox involves two beams of subatomic particles, one of electrons, the other of positrons (positively charged electrons). The two beams collide, annihilating each other, but in the process create two other beams, each consisting of high-energy photons that shoot off in different directions. Quantum physics predicts that each photon beam is fifty-percent vertically polarized (vibrating in the vertical spatial plane) and fifty-percent horizontally polarized; in other words, simultaneously in two different states, just like the cat who was half-dead and half-alive.

Two scientists monitor this experiment, one standing at the end of each beam of photons. Upon measuring his photon beam, Scientist Alpha finds it is one-hundred-percent vertically polarized (this process is termed "state vector collapse," meaning the dual-natured beam collapses into one precise state because of the measurement—equivalent to opening the door on the cat and peeking inside). Unaware that Scientist Alpha has made a measurement, Scientist Omega correctly assumes that his beam of photons is simultaneously in *both* polarized states. But because Scientist Alpha already has pinned down his beam's polarization, the equations of quantum physics endow him with "psychic" abilities. He now can predict precisely what his compatriot will see in the second beam of photons, even though there is no known causal relationship between the two beams. Scientist Alpha measured vertically polarized photons in his beam; therefore, he correctly predicts that Scientist Omega will measure horizontally polarized photons in the second beam. In other words, the act of measurement by one party affects what a second party will see—just by the act of measurement alone.

SRI's Harold Puthoff, who describes this physical conundrum, believes that it clears the path for acceptance of psi: "I don't think a polarizer has to be made out of plastic. There is no reason why brain protein can't work instead." Puthoff and other physicists suggest that this example from quantum physics proves that there is no theoretical block barring one brain from determining the state of another brain or physical system.

Some scientists, including Albert Einstein, were very uncomfortable with the dual-nature simultaneities of quantum

physics. Einstein's famous "God does not play at dice" is evidence of his objection. So years ago the concept of "hidden variables" was proposed, which theoretically linked the indeterminism of quantum reality with the determinism of conventional reality, in effect, causing the cat in the room to be unambiguously either dead or alive, not both at the same time. This same "hidden variable"—a sort of quantum physics fudge factor—then could be given responsibility for causing the second photon beam to be polarized exactly opposite from the first one measured.

Long since abandoned as a factor in quantum mechanics, the hidden-variables concept has been resuscitated by Dr. Evan Harris Walker, research physicist at the army's Aberdeen proving ground and a leading psi theorist. According to Dr. Walker, "hidden variables interconnect events at different locations in space and time, but those variables do not have any functional dependence on the space-time separation of the events." In simpler words, apparently non-causal happenings, like predicting the roll of dice, actually might be controlled by variables that scientists know nothing about. Walker proposes that *consciousness* is the hidden variable. If so, there would be no theoretical reason denying that consciousness could influence events that were separated in space and time. Uri Geller could "guess" the number of the dice in the box because he "willed" it to take the state that it did, explains Puthoff. If Walker is correct, human will, or intentionality, thus becomes the hidden variable linking the realms of quantum physics, humans, and psychic phenomena.

One problem with Walker's thesis is that there is no way of *disproving* it. By definition the variables are hidden and therefore undiscovered, if not totally undiscoverable. That is an unacceptable situation for scientists who insist that any theory must be disprovable before it assumes validity. Yet modern science has accepted the role of an "observer" or "participator" as crucial to the outcome of any experiment. (Scientist Alpha in the photon beam experiment, for example.) Walker argues that the "participator" is nothing other than a euphemism for "consciousness."

Equally intriguing are the recent revelations of neuroscientists in their probings of the three and one-half pounds of gray-pink matter called the human brain. Brain research

today is roughly at the same stage of development that physics had reached at the turn of the century. Many neuroscientists anticipate a new paradigm that soon will cast its unifying net over all the diverse directions of neuro-research. In less guarded moments, some establishmentarians even include psychic phenomena in their prediction. Adding to the neurological puzzles of hypnotism, biofeedback, and acupuncture—which only recently have been accepted as legitimate areas of inquiry—are even newer findings, all of which suggest that psychic phenomena may not be manifestations of *paranormal* happenings, but supremely *normal* functions of man's most finely tuned and unexplored organ. Whether they are important functions or not is an entirely different question, though most scientists now believe that every last cell of the human organism serves a serious purpose. "You can be damned sure that nature uses every aspect for survival of the system," comments Stanford chemist Harden McConnell. "Nothing is unimportant."

McConnell's group at Stanford recently helped determine two potentially breakthrough leads into the workings of the brain. Using ultra-sophisticated magnetic measurements, one team of his researchers recently confirmed that the behavior of red blood cells can be altered substantially by the addition of just one to three molecules of a brain chemical attached to each blood cell. This strongly suggests that the functions of the brain—and perhaps the rest of man's system—may be susceptible to incredibly minute fine-tuning by just the variation of a few molecules. Thus, sensitivity of the brain and other physiological functions may be far higher than previously suspected. Recall the sensory abilities of simple *Phycomyces* and electric fish. Are their fine sensitivities merely vestigial has-beens in humans, cast aside by our evolutionary climb?

The second finding is even more startling. For the first time there is direct evidence that cell-like membranes vary their structural orientation when subjected to a magnetic field. In effect, the lipid bilayer of the membrane that surrounds living cells lines up like orderly rows of growing wheat in response to an experimental magnetic influence. This has tremendous implications.

Consider another analogy. Lipids are long, fatty mole-

cules that constitute the "skin" surrounding individual cells. Think of them as bricks in a wall protecting a medieval town. The wall can be made stronger or weaker, depending on how the bricks are lined up. Arranged one way, they may leave holes that outsiders either can creep along or gallop through, depending on the size of the hole. The same for lipids. They mediate the flow of chemicals and electric charges across the cell membrane into the interior and back again. Alter them and the flow of messages across the membrane is altered, thereby altering the function of the cell, including the cells in the brain.

If, as McConnell and fellow researcher Betty Jean Gaffney suggest, these lipid membranes in the brain react to fluctuations in magnetic fields, man's conception of how he thinks may be completely altered. The excited Ms. Gaffney (now an assistant professor of chemistry at Johns Hopkins) says that she strongly resisted this revolutionary conclusion, taking "two solid years of calculations before allowing the possibility, which I thought was absurd." So opposed was she to the possibility that magnetic fields might play some role in physiological function that she once voted down a proposal that suggested research be done on the possibility of magnetic influences on cancer cells. "I thought it was the craziest thing I'd ever read." Now, thanks to her own research, Ms. Gaffney is forced to consider the idea that magnetic fields do indeed play an important role in affecting the behavior of living things.

Some studies indicate that humans do in fact react to small changes in environmental magnetic fields. Researchers at UCLA beamed magnetic pulses at the heads of subjects who then reported tingling sensations around their noses and upper lips. Dr. Robert O. Becker, an orthopedic surgeon at the State University of New York, has knocked animals unconscious just by placing them in a strong magnetic field, and he has awakened anesthetized animals by applying electrical current to the frontal parts of their brains. Becker also uses implanted electrodes to stimulate regeneration of bone fractures in humans. In an even more amazing demonstration of the response of living cells to outside energy, Stephen Smith, an associate professor of anatomy at the University of Kentucky, amputated the right foreleg of a frog, then implanted electrodes at the

stump. For a year the frog carried a tiny battery backpack that fed continuous direct current to the stump. Result: the frog regrew its entire leg—toes and all. Some doctors are placing severe-burn patients into magnetic fields thirty thousand times that of the earth's to speed their healing, even though they cannot explain why the magnetic field helps. Marilyn Ferguson, in her book entitled *The Brain Revolution*, reports that University of Illinois researchers beamed high-intensity magnetic fields at cancerous mice and found significant improvement. Five of twenty-two mice rejected the tumors (though later tests were not as successful).

One of the more intriguing papers delivered at the 1973 psychotronic conference in Prague was by Yuriy Andreyevich Kholodov, a well-known Soviet brain researcher, who reported that magnetic fields four hundred to two thousand times that of earth's, when beamed at the heads of rabbits, caused significant increases in slow brain waves and spindles (sharp jumps of EEG activity). The most significant reactions occurred in the hypothalamus, a region of the brain identified with emotional states and feelings of pain, pleasure, hunger, and sexuality. Long relegated to the domain of kooks, the concept that changes in the geomagnetic field might affect human behavior is gaining respectability. A State University of New York study correlated thousands of psychiatric admissions with changes in the earth's magnetic field. Other researchers have identified suicide rates, accident levels, and even murders with changes in background energy.

Scientists at UCLA's Brain Research Institute have removed the brains of chicks, dunked them in cyanide solution to ensure they are dead, then beamed minute amounts of radio energy at them. Surprisingly, the researchers found that the low-frequency radio waves stimulated the dead brains to release significant amounts of calcium, a critical ion in many brain functions. Ross Adey, director of the laboratory that conducted the experiments, says this proves that brain cells keep their crucial binding properties for some time—even after death. Other work in his laboratory has shown that monkeys subjected to a low-level, seven-cycle-per-second electric field significantly increase their reaction times to a learned task. The electric field, equiva-

lent in power to that from two ordinary flashlight batteries, also caused a specific seven-cycle EEG pattern in monkeys' brains to increase. In other words, a weak, external electric field was capable of driving the brain rhythms at the same frequency. The electric field also caused significant changes in behavior. Adey's group has trained cats to alter their brain rhythms in response to a special signal. Some of these cats were then subjected to radio-frequency radiation during their learning trials. The results, according to Adey, "are extraordinary." The radio radiation of the cats' brains apparently caused them to learn their tasks and remember them far faster than the non-radiated animals. The non-radiated cats forgot their tasks within two days. The cats that got zapped with radio signals remembered their lessons up to sixty days after being taught. Adey cannot explain why.

One consequence emerging from this research is that increasing numbers of scientists speculate that living cells, particularly those in the brain, may at times behave like solid-state electronic components, liquid crystals resonating in response to all the many fields of energy that surround us. At a quiet, almost secret conference held in Aspen, Colorado, a few years ago, the National Science Foundation brought together a number of scientists concerned with the biologic effects of magnetic and electric fields. The fact that the prestigious and conservative NSF even acknowledges the possibility of such effects is in itself revealing. But the ultimate surprise came in a paper delivered by Francis Cole of the Ochsner Medical Foundation in New Orleans and E. R. Graf of Auburn University's electrical engineering department.

"The possibility that organic micromolecules, primitive proteins, and, indeed, perhaps life itself developed dependent upon extra-low-frequency fields in the 10-Hz region raises the all-important question as to whether such a dependency continues to exist in contemporary life forms," stated the two scientists, immediately going on to suggest that such a continuing relationship does indeed exist. Cole and Graf argue that the 10-Hz (cycles per second) electromagnetic frequency that resonates between the earth and ionosphere like a trapped wave could have entrained the protein molecules of all living systems. Over eons, suggest

the two scientists, this "Schumann resonance" frequency sensitized the dipolar proteins, evolving a "very efficient and highly evolved ELF (extra-low-frequency) transreceiver system within living organisms." That is, "brain radios."

Proteins that evolved in such a system would be tuned in to 10-Hz electromagnetic radiation, speculate the scientists, just as the human eye is sensitive to that region of the electromagnetic spectrum (the visible) in which it has been bathed for millions of years. The atavistic significance of the 10-Hz rhythm cannot be overlooked: it provides a timing mechanism for biologic systems. The feeling of well-being in humans coincides with the level of alpha brain wave activity, which centers at 10-Hz; when a person's muscle is tensed 10-Hz microtremors are generated. All these are possible manifestations of the same Schumann frequency, contend Cole and Graf.

Thus, proteins in all living things, both plants and animals, may act as ultra-sensitive transmitters and receivers of information carried on 10-Hz Schumann resonance frequencies that continually circle the earth. One frequent objection to such a theory is that living things lack the necessary power to "broadcast" intelligible signals. The human brain, after all, runs only on about ten watts. No matter, respond Cole and Graf: "What we are proposing is that proteins evolved under the influence of this frequency, and, thus, both the transmitter and receiver are exclusively matched to one another and can discriminate this signal from random environmental noise."

Of all the psychic experiments carried out at SRI, the one with the greatest potential is a pilot study in which Puthoff, Targ, and psychologist Charles Rebert measured signals in the brain that they claim correspond to subconscious reception of telepathic/clairvoyant information. The experiment consisted of two people, a "sender" and a "receiver," both hooked up to EEG recorders that tracked their brain waves. The purpose was to see if a randomly flashed light (visible to the sender) could be sensed para-normally by the receiver, who was in another room. Four unnamed females (one of them Jean Mayo, the artist who participated in Geller's drawing trials), ranging in age from

twenty-two to fifty, were volunteer receivers in the experiment. Two of them were artists; one a photographer; one a teacher. Two separate shielded rooms in SRI's Life Sciences building (where Geller conducted some of his drawing tests) were used. The sender was seated in a soft, leather easy chair in front of a Xenon strobe light. The receiver sat in a similar, soundproofed, shielded room about twenty-five feet away and had to guess whether the light was flashing or not, and if so, at which of two frequencies. She signaled her choice by tapping a one-way telegraph key connected to the experimenters.

According to Puthoff's and Targ's report to *Nature*, one of the original four receivers (Mrs. Hella Hammid) showed significant changes in her EEG patterns when the remote light was flashed, strong evidence that she detected the light paranormally. Mrs. Hammid was the oldest subject in the group, a professional children's photographer and long-time friend of both Targ and his wife. Born in Germany, she is intelligent, witty, and—until her experiments—relatively uninterested in psychic phenomena. Only by chance did she participate at SRI. On a social visit to the Targ residence, Mrs. Hammid allowed herself to be wired up to a simple biofeedback machine as a lark. But she surprised Targ with her ability to maintain a strong alpha (nine to eleven cycles per second) brain wave pattern. He asked her to serve as a subject in his EEG work, using her daughter (J. L.) and Targ himself as senders. She credits her well-defined alpha patterns to a spontaneous ability to relax, a trait developed in preparation for her two natural childbirths and later reinforced with a course in Silva Mind Control. Mrs. Hammid's attitude is refreshingly relaxed about the EEG work. If she can be of help to the experimenters, that's fine. If not, it is no loss on her part.

After considerable analysis of the complicated EEG readouts—which are difficult to interpret under any circumstances—Puthoff and Targ concluded that Mrs. Hammid's alpha rhythms decreased in power significantly whenever the light flashed at sixteen times a second. Her alpha pattern also decreased slightly when the light flashed at six times a second, but the scientists believe that the decrease was not large enough to be significant. Equally as interest-

ing was the finding that none of the four subjects, Mrs. Hammid included, guessed better than chance when they attempted to "see" whether the light in the other room was on or off. Apparently whatever information Mrs. Hammid received, informing her brain that the sixteen-cycle light was flashing, was not surfacing to her conscious level.

Aware of the extreme tentativeness of this experiment, primarily because there are far too few data, Puthoff and Targ hedge themselves, calling the effort a pilot study that "may prove to be useful as a screening procedure for latent remote perceptual ability in the general population."

Charles Rebert, the EEG specialist who took the data, originally fought the interpretation that the alpha effect was due to paranormal sensing, suggesting instead that it was due to subliminal cueing, either minuscule amounts of electromagnetic radio frequencies or vibrations that Mrs. Hammid was sensing. Though his name was taken off the paper sent to *Nature*, Rebert later agreed with the paranormal hypothesis and submitted his own write-up of the experiment to a professional psychology journal. "The data couldn't have been collected by anyone who hated them [Puthoff and Targ] more," comments one close observer. Later checking ruled out the possibility of subliminal cueing between the shielded rooms, thereby strengthening Puthoff's and Targ's hypothesis that Mrs. Hammid was in fact receiving information from a remote scene, that the information was being processed in her brain to a limited extent, but was not being passed on to her conscious, verbal self. Data from the EEG experiment now is fed directly into a computer for near-instantaneous analysis, eliminating the error-prone hand analysis previously used. Other improvements have been made in the experiment as well, as Puthoff and Targ continue to run subjects and collect EEG records. The original tests only collected gross brain wave patterns from the center line of the scalp. Later tests discriminated between the hemispheres of the brain that responded to the remote light, the results of which provoked even more surprising conclusions about the paranormal. But first, some background.

With the development of sophisticated techniques of brain surgery in the mid-sixties, patients suffering from in-

tractable epileptic seizures were treated by severing the large bundle of two hundred million nerve fibers (*corpus callosum*) connecting the left from the right brain hemispheres, leaving each half intact but functioning independently without any cross communication. Surprisingly, a person who has recovered from such an operation might easily go through a medical examination without giving off any trace of the massive brain severing. But subsequent testing of such patients has determined a hitherto unsuspected and astonishing difference between the two halves of a human brain. According to California Institute of Technology professor Roger Sperry, a pioneer in split-brain research, each separate left and right half "appears to have a separate 'mind of its own.'"

The left hemisphere is believed responsible for man's ability to speak, to write, and to calculate; it is the center of linear thinking, logical, step-by-step reasoning ability. The right half dominates the nonlinguistic in man, processing spatial patterns and relations in a holistic, unitary sense rather than a fragmentary and analytic way. Faced with this yin-yang division of the human brain, many researchers show a seemingly cultural preference for the analytic hemisphere. A few even are reluctant to grant consciousness to the "minor" (right) half, contending that it is carried along in a trance-like state like so much excess baggage. Such left-brain, verbal chauvinism is suggestive of the historic arguments of male dominance over female, scientific rationalism over artistic intuitiveness, and West over East. Roger Sperry counters such bias with the assertion that both the separated hemispheres "may be conscious simultaneously in different and even conflicting mental experiences that run in parallel." His studies show that a single half of the brain can think independently, in complete absence of the other half. Just consider: two independently aware seats of consciousness within each person. Does it also mean that we may possess an unrecognized, unacknowledged system of perception that operates independently from our everyday, linear way of knowing?

SRI scientists Harold Puthoff and Russell Targ say that their EEG findings do indicate that the right brain has a separate, and unknown mode of, perception. In their later

tests, with EEG electrodes placed on either side of the scalp to differentiate between left and right brain responses, they found that it was the alpha pattern from Mrs. Hammid's right hemisphere that responded to the remote signal. The evidence for this finding is still tentative and needs confirmation by independent laboratories. But if it is found to be a repeatable phenomenon, as Puthoff and Targ insist it will be, neuroscience will be forced to consider a new and revolutionary paradigm.

Psychologist Robert Ornstein, author of the seminal book popularizing left-brain, right-brain theories, *The Psychology of Consciousness*, originally was contracted by SRI to help organize Puthoff's and Targ's *Nature* paper. Partly supported by the navy's recent funding, Ornstein now is carrying SRI's EEG work further in an attempt to pin down Puthoff's and Targ's pilot studies. Scattered reports from Russia, Japan, Canada, and the United States indicate that others also have found correlations of brain waves with psychic function. In particular, two recent Canadian pilot studies add to the growing evidence.

In September 1970—before SRI's tests—three medical doctors measured averaged evoked responses in the brain believed to have been stimulated by telepathic transmission from a second subject. (The authors prefer anonymity presumably to protect their private medical practices, though it is a highly questionable procedure and hopefully an isolated instance.) They report logging brain patterns similar to those produced in response to sound, but resulting from subliminal psychic communications that never reached the consciousness of the receiver, just as at SRI. Later tests corroborated this study, the report of which is in press. Another Canadian, Dr. Joel Whitton, reports that he has identified characteristic shifts of brain waves toward lower frequencies (1-4 Hz) each time a successful paranormal event is willed, like "going out of body."

These reports, together with the one from SRI, should be taken seriously, and they cry out for replication elsewhere. Some laboratories in this country are attempting to check out such potentially important findings, but they work secretly, for fear that admission of such psi interests would bring down the wrath of skeptics. Better that this

research be brought into the open than have it conducted behind closed laboratory doors with the resulting information available only to a few chosen insiders. The issues involved are too important. Until such unequivocal tests can be carried out, however, belief in paranormal phenomena boils down largely to experiential truth. No one else's word should be taken for granted, no matter how many academic degrees they have after their name. Neither should all reports be dismissed out of hand. It is a field replete with charlatans, misguided believers—and a chorus of "rationalist" skeptics. Even Harold Puthoff finds it hard not to admit to an occasional questioning: "I still have to see it to believe it."

"This is a left-handed conspiracy we have here," laughs Russ Targ, playing half-seriously with the idea that paranormal perceptions may manifest themselves more in left-handed people, since their right brain (which controls the left hand) is dominant. Targ is left-handed; so are Geller and Swann. If there was a conspiracy at SRI, it may well have been nothing more than an intuitive union of right brains.

Esoteric spiritual traditions also emphasize right-brain functions. The meditative techniques generally identified with Eastern philosophies, writes Robert Ornstein, "... have specialized in the tacit, receptive, holistic mode, the mode identified with the Right, one largely inaccessible to language and reason." The techniques practiced by such esoteric believers help suppress the analytic, language-dominated, left-brain functions.

Don Juan tells his disciple, Castaneda, to "stop your internal talk," in order to view the separate reality. This, in effect, is what psychologist Charles Tart calls for in his more formal request for "state specific science"—simply a science that momentarily hushes the culturally dominant verbalizations of Western man in order to explore his innate, intuitive realities.

What Puthoff and Targ have provided in their sometimes fuzzy, sometimes misdirected, sometimes astonishing search for psi are glimpses of a paradigm that may grow to sustain the concept of Don Juan's separate reality. The SRI researchers have brought their mixed case to the orthodox

scientific community. Now it is time for others in the mainstream of science to come forward, to display the integrity, open-mindedness, and courage it takes to conduct such experiments openly, and either verify or deny them. Their findings, if substantiated, will help lead the way into the science of the twenty-first century.

But where do all these speculative acrostics lead in a final judgment of Uri Geller, Ingo Swann, and Pat Price? Unfortunately, none of this theorizing provides an unequivocal answer. For a public and scientific community befuddled with countless claims and counter-claims, by believers and debunkers alike, I recommend the following assessments.

Uri Geller's unusual stunts may be entirely the result of hidden variables, extra-low-frequency radiation, tacyons, or a host of other unknown cryptesthetic sensibilities that now pass under the broad term of paranormal. The researchers at SRI—Harold Puthoff and Russell Targ—selected what they thought at the time were the best examples of Geller's psi abilities and succeeded in publishing them in a highly respected scientific journal. That in itself is a considerable step toward breaking down scientific prejudice.

Puthoff and Targ staked their reputations on some quite serious assertions: that eight times Uri Geller correctly called the roll of a dice; that he telepathically or clairvoyantly "viewed" drawings, the chances of which exceeded one in three million. If true, these are indeed unusual feats. Puthoff and Targ are men of good faith, and despite the large number of Scientologists involved in the SRI research, I found no evidence that any covert conspiracy attempted to subvert or bias their results. But SRI's search for psi was marred by severe inconsistencies in method and reporting. It seems also that the researchers were inadequately prepared to deal with Uri Geller's personality, which includes a history of admitted theatrics. The problem with Geller is that he has been made into a stalking horse for both sides in the raucous debate over reality of psychic phenomena. In large part he attained this king-of-the-mountain status by benefit of a massive dose of self-promotion. Uri is inordinately eager for the publicity

and personal gain that attend such stardom. First and foremost he is a showman. That aspect of his personality literally makes everything he touches suspect, no matter how sincere, honest, and capable the researchers are who attempt to pin down his elusive veracity. So who really cares? It would be better just to ignore him. When all the loose factors are totaled, with all the performances, talk shows, high psi-ciety shenanigans, and scientific testing, Uri Geller's historic importance is that he catalyzed a worldwide search for psi and focused legitimate and serious attention on an aspect of human experience long relegated to mystics and kooks. Ironical as it may be, magician Uri Geller may have shaken science out of a lethargic state of prejudice and prematurity into one that, in the long run, may succeed in enlarging man's vision of himself and the mysterious nature around him.

What of Ingo Swann and Pat Price?

Their cases are more clear-cut. The remote viewing evidence amassed by SRI is impressive. Barring fraud, I am persuaded that extended vision does take place, with the level of accuracy gleaned by Swann and Price* perhaps running as high as seventy or eighty percent. I believe the SRI evidence does support the thesis that man normally is not aware of all his inner senses, that he can, through deliberate effort, exert control over these hitherto esoteric perceptions.

If paranormal phenomena are nothing but hoax and laboratory artifact, as some assert, let the best laboratories in the land make that declaration. But base such judgments on honest experiment unencumbered by prejudice and rhetoric. If mankind does have dimensions yet unmapped, we would be derelict in not dispatching our very best cartographers of mind and body to explore this unknown land.

In a massive textbook on gravitation, physicist John Wheeler and his co-authors explore the theoretical limits of such heretical concepts as frozen time and mirror cosmologies. All their pages of purposeful equations are linked by a sense of the awesome nature of a reality come alive with "mysterious vigor." Wheeler and his associates have

traversed the edge of the universe with their minds, and they returned to conclude that "the pursuit of reality seems always to take one away from reality."

How true. How magnificently necessary.

* Pat Price died unexpectedly in Las Vegas on July 14, 1975.

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(Unfortunately, room does not permit acknowledgment of all the numerous articles and personal interviews that contributed so greatly to the formation of this book. I do wish to cite, with appreciation, several books that have been central to my considerations.)

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