

SIEMENS

DECEMBER 1980 \$2.00



**SUPERGENES: DECODING
THE SECRETS
OF IMMORTALITY**

**MEGAWAR: THINK-TANKING
THE UNTHINKABLE**

**THE TEN BEST GAMES
OF THE YEAR**



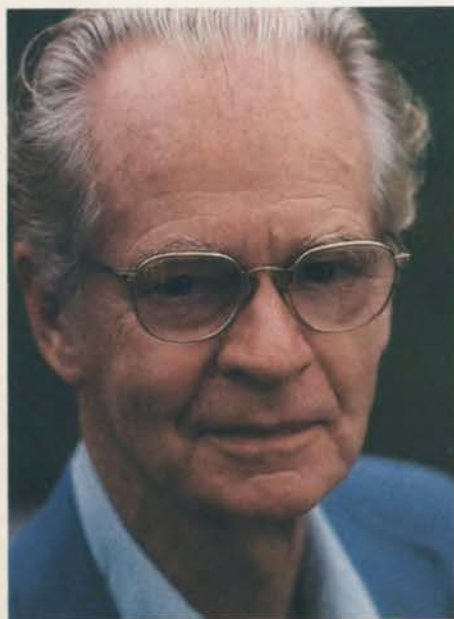
PSYCHED OUT IN MONTREAL

PEOPLE

By Dick Teresi

P sychologists at meetings do things that other professionals would shy away from, for fear of what people would make of their behavior psychologically. The annual convention of the American Psychological Association (APA), held this fall in Montreal, was filled with behavior rich in such imagery and symbolism.

Leon Festinger, for example, of the New School for Social Research, chain-smoked through his invited address, "Can the Science of Psychology Address the Question of Human Nature?" **Bernie Zilbergeld**, of Oakland, California, who is catapulting to fame for having attacked the sex therapy of Masters and Johnson in *Psychology Today*, smoked his pipe and crumpled papers while other panel members at his symposium held the floor. And **Philip G. Zimbardo**, of Stanford University, arriving late for a symposium at which he was to speak, came up behind fellow participant Arnold H. Buss, of the University of Texas at Austin, threw his arms around him, and kissed him. Most quotable speaker at the convention



B. F. Skinner: "The rat is always right."

was none other than **B. F. Skinner**. Some sample Skinnerisms:

- "I've often said that my rats have taught me much more than I've taught them."
- "The rat is always right."
- "Someone asked me yesterday how I could keep going on when people so misunderstood me. I said it's all a matter of scheduling. All I needed was to be understood once a year."

Another star of the convention was **Hans J. Eysenck**, of the University of London. Eysenck told about a little behaviorism (systematic desensitization) he once applied to himself: "My fear of spiders didn't bother me until I was courting my wife, who was more afraid than I was. So I read books about spiders, looked at pictures of spiders, caught flies and fed them to spiders, and finally I got to like the damn animals."

Donald O. Hebb, of Dalhousie University, in Nova Scotia, regaled the convention with anecdotes about **Ivan Pavlov**, the pioneering Russian physiologist famous for his work with dogs and the conditioned reflex. Hebb told of a colleague, **Boris Petrovich Babkin**, who had worked for Pavlov, collecting gastric juice from a dog. "The dog was bored and whined," said Hebb. "In the next room . . . was Pavlov, trying to write a paper. Suddenly through the door came Pavlov with towel in hand, which he used to whack the dog over the nose, telling it to shut up. Back to his room he went . . . Then he was back again, shaking his finger in Babkin's face, and saying sternly, 'Babkin! Never strike a dog! Never, never, never!'"

In the convention's pressroom, one veteran reporter was heard to say, "I'm just resigned to it by now. The only psychologists I count as friends are the ones I've never written about." And a final comment from a taxi driver who had been hauling APA conventioners around all week: "How many psychologists does it take to change a light bulb?" [Answer] "Only one, but the light bulb has to want to change."



Mary Leakey: One more time, for the cameras.

Meanwhile, on the archaeological front, **Mary Leakey** revealed some of the not-so-spontaneous aspects of scientific discovery in a recent interview with *Omni* reporter Susan Mazur. Retelling the story of the finding, in 1959, of the *Zinjanthropus* skull, Leakey explained how she and her late husband, Louis, actually made this pivotal discovery in Africa's Olduvai Gorge twice—once for themselves and once for the cameras. Leakey described it, "I was prospecting. My husband wasn't feeling well. I saw a bit of bone that looked strange. It was, in fact, the mastoid of the skull. And when I brushed some soil away, I found some teeth, which showed it was hominid straight away. So I fetched my husband away from camp. . . . And we were very fortunate because Les Bartlett, a professional photographer, was to come down. So we covered it up and waited till he arrived two days later. We have a film now of the whole uncovering of the skull, which is very fortunate." Proving that even in 1959 some scientists were already conscious of their roles as media stars.

NIGERIA 2000

EXPLORATIONS

By Susan Mazur

Seasonal rains teem on downtown Lagos. The humidity produces a kind of fever. You are reluctant to breathe. The streets are pocked with quagmires of mud. If you miss a step, you land in an open sewer. The only opiates for the rawness of the place are the colorfully wrapped women who sell peanuts, cola nuts, and fruit in the marketplace.

"Briefly put, our towns and cities are, almost without exception, inhuman," Nigeria's *Sunday Times* says.

But this is not going to be the Nigeria of tomorrow, or, as Nigerians like to say, "the day after tomorrow." With Alhaji Shehu Shagari, a former science teacher, as the first democratic president of the country, Nigeria is moving to meet the future by developing an infrastructure based on science and technology. And with the wealth of 20 to 40 more years of "petronairas" fueling its plans, Nigeria will rival Western industrial countries in modernity and creative design.

For starters, Nigeria has allocated several hundred million nairas (\$1.80 = 1 Nigerian naira) to move its capital from

Lagos, on the coast, to the center of the country. This city of the future, at Abuja, will serve as the new seat of government by 1982 and will bring greater coherence to the estimated 100 million people (predominantly of the Yoruba, Ibo, and Hausa-Fulani tribes) sprawled over an area one fifth that of the United States.

Part of the appeal of the 7,800-square-kilometer site is its beauty. Bordered by hills to the north, east, and south, the terrain is savannah—tall grass, trees, and soft undulations of the landscape. Year-round temperatures vary from 21 to 26 degrees Celsius. The breezes are gentle and clean. And the Niger River is just 24 kilometers away. It is said that Abuja will pick up where Brasilia, Brazil, and Islamabad, Pakistan, left off and that of all the great cities of the world only Florence, Venice, and Stockholm were as imaginatively planned.

Abuja will meld the best elements of Nigeria's past and present. Architecturally, it will draw from civilizations like the Benin, which by A.D. 1400 had evolved into a highly developed culture.

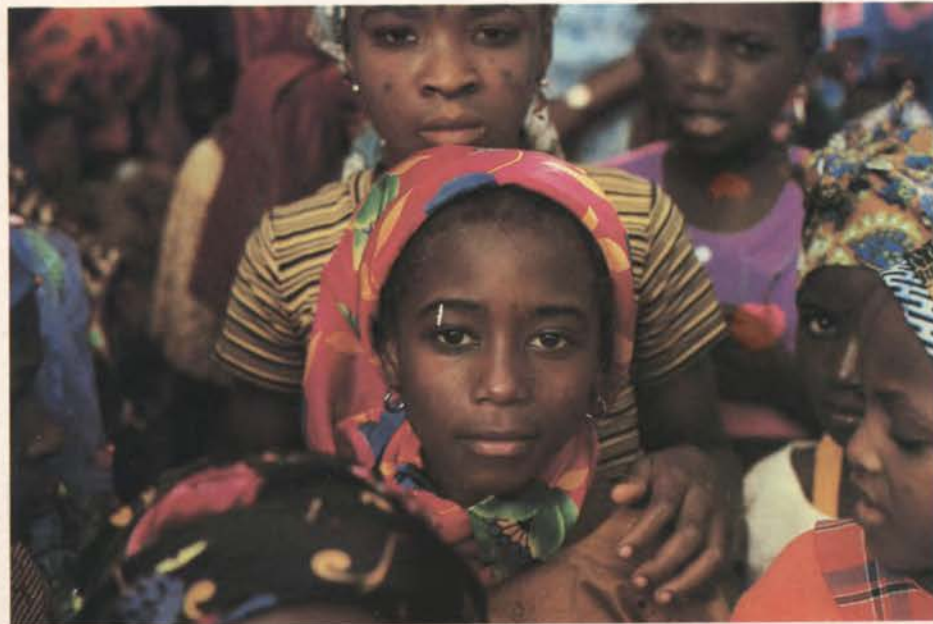
And there are the Nok, a people of mysterious origin that flourished from 900 B.C. to A.D. 200 as the first Iron Age culture in sub-Saharan Africa, then disappeared, leaving behind caricaturelike sculptures of terra-cotta human and animal figures with triangle-shaped eyes.

To infuse life into this dream of Nigeria reborn, the Ministry of Transportation will undertake the development of a new physical network: a standard-gauge, 166-kilometer-per-hour railway system that will crisscross Nigeria, facilitating the movement of domestically manufactured goods and passengers; four major two-way highways to be utilized for the distribution of agricultural products; a half-dozen international airports and 20 domestic airports; three ocean terminals to service Nigeria's fishing, steel, and shipping industries.

Harvard-educated Dr. Sylvester Ugho says the immediate goal of his year-old Ministry of Science and Technology is to see that by the turn of the century at least 50 percent of Nigeria's exports—exclusive of crude oil—are of industrial goods and that there is self-sufficiency in food production. "Science and technology are going to preempt everything," Ugho says.

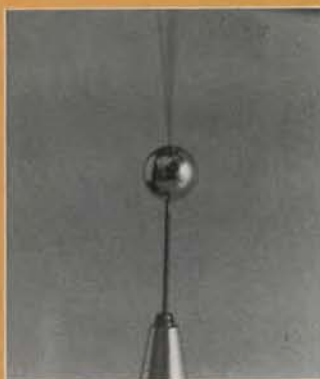
"But there are a multitude of hassles here," reports Ron Parson, science officer at the U.S. Embassy in Lagos. While there are tens of thousands of young Nigerians who go abroad each year to study, including many in the sciences and at the doctoral level, not enough return to Nigeria, having found the standard of living abroad more attractive. This has created a dearth of qualified people—especially lab technicians—in Nigeria's work force. The nation's literacy rate is a mere 25 percent. Yet the government has decreed that Nigeria's industrialists and businessmen must adhere to a quota of 5 foreigners to every 1,000 Nigerian citizens hired to work in factories and shops.

These snags give rise to situations like a medical factory shutting down production for two to three weeks because someone forgot to order raw materials. There are regular interruptions of the telephone service and of the power and water systems,



Nigeria's next generation will benefit from their government's commitment to the future.

NEXT OMNI



FUSION



FUCHS



PRIZEWINNERS



FICTION

FUSION—The energy secret of the sun itself. Is fusion the ultimate solution to our energy problems, or is it the quixotic excess of rampant technology? For 30 years the physicists of many nations have tried to duplicate the searing conditions that exist in the heart of a star. Now they claim success is near and that limitless energy lies almost within our grasp. What will a fusion-powered world be like? Who will profit from fusion energy? What are the political payoffs of this compelling energy dream? Next month's *Omni* examines the fusion story in full: its promise, its problems, and the people who are striving to harness the infinite energy of the stars.

TESLA POWER—The shortest route to practical fusion may be a tour through technological history. Robert Golka claims that inventor Nikola Tesla, who pioneered our AC electrical system, may have been on the right track in 1899. Tesla made artificial ball lightning, the rare spheres of electricity that inspire many UFO reports. Golka has just duplicated Tesla's work and thinks he can build a fusion generator within five years—if only the Energy Department will give him the chance.

INTERIOR VISION—A gallery of paintings by Ernst Fuchs reveals the genius of visionary art in *Omni* next month. A leader in the Viennese school of Fantastic Realism, Fuchs explores the human condition sublogically, through hypnotic images of great intensity and strangeness. Fuchs takes the viewer into a hallucinatory realm that combines mystic allegory with a disquieting perception of man's future condition. Don't miss this portfolio of spectacular conceptions in the January *Omni*.

PRIZEWINNING PHOTOGRAPHY—The best of nearly 6,000 entries reflect the amazing talents of *Omni* readers as we present the results of our first photography invitational. The most accomplished effort, our Grand Prize winner, is showcased in this issue on pages 150 and 151. Other skillful submissions from around the world make up a stunning pictorial of phenomenal sights in the January issue of *Omni*.

SCIENCE FICTION—A tale about a man so obsessed with dying that he constructs "A Cage for Death" highlights *Omni*'s January fiction. John Keefauver's hero in "Body Ball" searches for the ultimate gamble, and a scientist in Bob Buckley's short story "Where No Man Goes" races against time to fulfill a recurring dream.

which visitors to Nigeria know only too well.

Parson views the quota as ultimately beneficial, because he believes it will lead to a large, competent sector of industrial technicians in 20 years. As more Nigerians return from schools abroad, Parson predicts, significant progress will be made in the Nigerian sci/tech infrastructure by the year 2000.

Dr. Felix Oragwu, a nuclear physicist and probably the single most knowledgeable scientist in Nigeria, says it is Nigeria's aim to accelerate critical research in its 23 institutes (agricultural, marine, projects development, industrial, forestry, leather, and others) and 13 universities. He mentions a plan to introduce science in the elementary grades. By offering such aids and incentives as more relevant texts, correspondence courses, TV programming, and science fairs with cash prizes, Dr. Oragwu hopes to graduate three college students in the sciences to every two pursuing other areas of academic study.

Considering the high rate of illiteracy, Nigerian television is an especially crucial means of communication. It steers clear of the predictable superficiality of American television, preferring to let viewers enjoy enlightenment and entertainment in the form of energetic dramas and spontaneous comedies. For example, next month Nigerian filmmaker Eddie Iroh will air the first of a ten-episode science series, *Portrait of a Culture*, whose purpose is to create a new frame of reference for Nigeria's rich civilization. The first installment will open with a man and his son taking a "cultural holiday." As episodes proceed, they'll explore several archaeological excavation sites.

There is an eagerness among Nigerians not merely for a better tomorrow but for an exceptional tomorrow. You can see it in the enterprise of the markets, with exuberant vendors on the highways selling everything from medicine cabinets to hard-to-get copies of American magazines. You can see it in the hotels, where waiters wheel and deal with international businessmen while serving them coffee. If Nigeria can continue to channel this spirit into producing more relevant technology for its people, it will inspire Africa and the developing world and lend new direction to the developed world as well.

IN TRANSIT

For the smoothest transition between cultures, Nigeria Airways offers direct nonstop flights two times a week between Lagos and New York aboard a McDonnell Douglas DC-10. Nigeria Airways is the largest African airline and is third in the world in its record of safety (Nigeria Airways, 15 East 51st Street, New York, NY 10022). Close to downtown Lagos, the Eko Holiday Inn, on Victoria Island, overlooks romantic Kuramo Waters, where Nigerians still pole their way across in small boats. (For more information about Holiday Inns in Africa, contact: Holiday Inns, Inc., 3796 Lamar Avenue, Memphis, TN 38195.) ☐