OFF THE BEAT

Modern times: Is a human an artificial machine?

"Part of this person is to become mechanical." The quotation is from a description of the surgical operation for inserting an artificial ball in someone's hip. This, and the description of the operation for what is often called tennis knee, are read as accompaniment to a dance that was performed by Ruth Solomon at the University of California at Santa Cruz for a few evenings around the middle of July. The readings are done by three voices that get progressively more frantic as the performance goes on. At first they give the impression of news reports; then I began to get the feeling of people lecturing in an operating theater.

While the recitations continue, Solomon operates with a hanging metal frame consisting of several horizontal bars joined by various curves. The frame made me think of a set of parallel bars that had gone through a space-time warp. One sees similar shapes in the space-time diagrams of general relativists — things as they are on the way to a black hole.

Solomon does slithery gymnastics with the frame, sliding from bar to bar, wrapping herself around the bars, playing with the frame - but all in a slightly sinister way. I kept watching her hips and knees, thinking what these kinds of surgery would mean to a person whose art is founded on bodily motions.

But for others an artificial hip means the promise of walking again, or at least walking more easily. There are drawbacks, however. In case they should trigger the metal detectors at airports, patients request a note from the doctors stating that they have had the operation. It is indeed an embarrassment to be rejected by the Moloch through whose mouth we must pass to reach the realm where the force may not always be with us. It is often something treasured — a piece of jewelry or a part of us like the metal ball in the hip socket — that produces the incriminating ding. We do love our technology, especially our metal hip joints, and we do not wish them to be the source of our rejec-

Solomon's motions can be seen as making love to the metal sculpture, caressing its limbs and joints in a harsh demanding way. We can love our technology in a less aggressive fashion. In the hills just above Santa Cruz is an old logging railroad, affectionately preserved, that takes carloads of tourists up and down its mountain. On the day I was there they were mostly solemnhappy Japanese. It is easy to love a locomotive. With its panting and wheezing noises, its conspicuous motions and its clanking sounds a locomotive is almost a living animal, one whose bones are all metal. Folklorically they are in fact called animals - iron horses, hogs.

But modern technology is silent and antiseptic, not clamorous and greasy, and it must be loved in a colder, more chromium-plated way. There is very little sound in a room full of computers, and the only obvious motion is the endless rolling of large tape reels, as if Buster Keaton were playing Argus or vice versa. In fact the title of Solomon's performance is "Talking Will Be at a Minimum," a reference to the complexity of the surgery, which cuts down the usual gabbiness of operating room teams. Yet talking is precisely not at a minimum, especially not here. The voices become loud, raucous, accusatory. The dance ends as though the dancer were seeking escape from the bars.

Escape to what? Outside is the forested Santa Cruz campus where technology is at a minimum, where the deer if not the antelope play and you can sometimes pick up a coyote in your headlight beams. It stretches to the stars, the Skywalker realm, the road to the black holes.

Black holes are not so irrelevant here. On the same campus at the same time a group of prominent astronomers was meeting for three weeks to discuss quasars. Quasars may or may not have black holes in them - some astrophysicists suspect they do - but they certainly contain engines that generate tremendous amounts of energy. Nature imitates technology much better than technology ever could.

And here is catch 3C273. I escaped from my silvery metal cage and set off somewhere over the rainbow into the land of the pure lucite light force seeking the gentle nothingness of a black hole. What I found was a giant engine shooting streams of electrons at me. Tom Swift and his electric universe. It is unthinkable that technology could imitate nature in the quasar engine as it did in the metal hip joint, but the horror is that it may try. And talking will certainly be at a maximum.

Dietrick E. Thomsen



MARTIAN SUNSET LUNAR EARTHRISE

Genuine NASA Viking & Apollo high-quality FULL-COLOR ART PRINTS, 22" x 34". Ideal for permanent framing & display. Beautiful. \$10.95 each plus \$2.05 ins. pstg.

WOODSTOCK PRODUCTS

P.O. Box 4087, Dept. SN 32, Beverly Hills, CA 90213 Circle No. 138 on Reader Service Card

Back issues of SCIENCE NEWS

Completed volumes of Science News are available in microform from two sources. University Microfilms, a Xerox company, provides back issues of Science News in microfilm/microfiche/35-millimeter editions. For further information contact:

Xerox University Microfilms 300 North Zeeb Road Ann Arbor, Mich. 48106

Bell & Howell provides back issues of Science News on microfiche. For further information contact:

> Bell & Howell Micro Photo Division Old Mansfield Road Wooster, Ohio 44691

Individual back issues of Science News (except certain ones out of print) are available for 50 cents (through March) each. Send check to:

> **SCIENCE NEWS** 1719 N St. N.W. Washington, D. C. 20036



Circle No. 121 on Reader Service Card

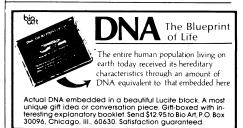
AQUA DISCOUNT, BOX E, ORTONVILLE, MICH., 48462

WHAT'S YOUR I.Q.?

Test yourself, family, friends. Valid, unique, fun! 10 years to adult. Reusable over and over. Everything included: Test, Instruc-tions, Scoring. Send \$5 to : Four Corners Press, Dept.SAT , Hanover, Mass. 02339.

AUTHORS WANTED BY NEW YORK PUBLISHER

Leading book publisher seeks manuscripts of all Leading book publisher seeks manuscripts of an types: fiction, non-fiction, poetry, scholarly and juvenile works, etc. New authors welcomed. For complete information, send for free booklet T-8. Vantage Press, 516 W. 34 St., New York 10001



Circle No. 124 on Reader Service Card



SCIENCE NEWS, VOL. 114, NO. 13

