

TECHNOLOGY

Gambling Robot Wins High

► A GAMBLING ROBOT that has been successfully beating the majority of its human opponents is in operation at the Bell Telephone Laboratories, Murray Hill, N. J.

Nicknamed SEER, the electronic computer has won 5,218 times and lost only 4,577 times against visitors and employees at the Laboratories. The odds against getting this large a lead by chance alone, D. W. Hagelbarger of the Laboratories said, are about 10,000,000,000 to one.

In addition to penny-matching to the enjoyment of those who want to match man against machine, the device has a serious purpose. It is a forerunner of computers that some day might be capable of adjusting to a changing environment. This would result in a machine that could do more than routine jobs.

Mr. Hagelbarger gives the following as one example for the use of a computer that can adjust itself:

"It is possible, if not probable, that it would be economical to design a telephone central office to measure traffic and adjust itself accordingly. It might observe that most calls from the business district occur during the day and more calls from the residential section during the evening, and connect its apparatus accordingly, yet it would be able

to readjust itself if a large fire occurred in the business section during the night."

He cautions that we are a long way "from anything as sophisticated as this," pointing out that the intellectual capacity of SEER is very small. Man, he states, has 10,000,000,000 neurons and the very dumbest army ant, 200 neurons. The electronic penny-matcher has less than 100 relays.

The strategy of the device, he reports, is based on two assumptions. The first of these is that the play of people will not be random. They are influenced by training and emotions so as to produce patterns in their play.

The second, to make the machine hard to beat, has the machine's output correlated only when it is winning and its play random when it loses.

The Bell Telephone engineer explains that the odds achieved by SEER should not be taken too seriously as many variables are factors. Some players use a simple sequence that the machine can beat just to see how fast it "catches on." This makes the machine's score higher.

On the other side, he says, are people who cheat the machine to see how it behaves when it loses.

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SURGERY

Stop Sporadic Lameness

► GRAFTS of the innermost tissue that surrounds the unborn baby in the womb have made it possible for patients disabled by painful, off and on lameness to walk and work again.

Good results with this treatment in more than 50 patients are reported by Dr. E. Troensegaard-Hansen of Charing Cross Hospital, London, in the *British Medical Journal* (Aug. 4).

The kind of lameness the patients suffered is called intermittent claudication. Severe pain in the legs makes it impossible for such patients to walk more than a few steps. Some are completely bedridden. Usually the pain disappears when the patient rests.

The condition occurs in diseases of the small blood vessels of the legs and arms in which blood circulation through the affected blood vessels is blocked, such as Buerger's disease.

The birth tissue Dr. Troensegaard-Hansen uses for grafts is called the amnion. He uses fresh tissue obtained immediately after birth of a baby. After special preparation, the tissue is tightly rolled into little "pencils" and implanted deep in the fat overlying the muscle covering in the thigh.

One patient, a 57-year-old printer who could walk only 10 to 15 yards before severe pain in both legs stopped him, now

walks three and a half miles, is perfectly fit and has kept his improvement for two years and three months. Another patient with a good result is now working as a postman.

Some patients have had to have second grafts done because the first was not successful. Altogether the new treatment has now been given to 60 patients. There was one complete failure. In three others with gangrene before the grafting was done, the condition of the leg deteriorated and amputation was necessary.

Dr. Troensegaard-Hansen believes the graft treatment works because the grafted tissue starts new blood vessels in the affected leg which increase blood circulation.

He discovered the effects of the treatment accidentally when using amnion grafts for leg ulcers in blood vessel disease. After the amnion grafts, not only did the ulcers heal but the intermittent claudication the patients had also was less severe.

He cautions that, in this disease, patients sometimes improve after long periods of no treatment except bed rest, so that more study is needed to be sure this graft treatment will prove specific.

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Kaolinic clays are particularly rich in aluminum.

● RADIO

Saturday, August 25, 1956, 1:45-2:00 p.m. EDT
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Two U. S. Air Force surgeons in Germany will discuss "Medical Care for U. S. Armed Forces in Europe."

MARINE BIOLOGY

Tint Shrimp as Tagging Method

► SHRIMP HEADS colored a pastel shade are the first reliable way scientists have found of tagging the marine delicacies.

The U. S. Fish and Wildlife Service has reported development of the method by scientists at the Institute of Marine Science of the University of Texas.

Biologists found that shrimp heads could be safely and lastingly colored by injecting the sea animals with certain dyes, or by introducing the dyes into their food. The injection method gives greater color variation.

The coloring will enable scientists to investigate the movements and migrations of shrimp populations. Previous studies have only been partially satisfactory because shrimp molt periodically as part of the process of growth, and this has hampered usual methods of tagging.

The research is part of a larger Fish and Wildlife Service project, including the first comprehensive anatomical study ever made of shrimp; an examination of the structure and chemistry of shrimp tissue, and a study of the effects of environment on shrimp.

The work is being done at Tulane University, Texas A. and M. Marine Laboratory and by Fish and Wildlife biologists at Galveston, Texas.

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PUBLIC HEALTH

A.M.A. Warns of Sun-Tan Pill Dangers

► A WARNING of possible danger in a new "sun-tan pill" is issued by the American Medical Association.

The pill is tradenamed Oxsofalen and chemically is 8-methoxypsoralen.

"Until more is known about its reliability and toxicity it remains an experimental drug," the A.M.A. states.

The drug has been used to treat a mottled skin disorder, vitiligo, with some success. It comes from the Egyptian plant called Ammi Majus Linn, a member of the carrot family. In crude form it has been used by Arabs for centuries, but the side effects of the crude drug included abdominal cramps, kidney disease, liver disease including cirrhosis, and prolonged unconsciousness.

The drug is available on prescription with the warning to be used only under the close supervision of a physician.

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