

PSYCHOLOGY

Mature Sex Films Impress Old More Than Young

➤ **MATURE SEX FILMS** are likely to have greater influence on middle-aged adults than on younger adults.

Films having sexual content sometimes receive more response from older than younger adolescents and more from adults than from young children, Dr. Arthur J. Brodbeck of Mt. Sinai Hospital, Los Angeles, reports in *Psychological Reports*, 8:59, 1961.

Dr. Brodbeck also found that a film dealing with constant fear of death was felt more powerfully by mature persons than by younger adults. This, he states, is contrary to the generally accepted idea that impressions from movies are less when the viewer is older.

Dr. Brodbeck said experience from life may cause this greater involvement with films about death, especially fear of death. As persons grow older and others around them become ill and die, problems and thoughts about death become more important.

To test this hypothesis, a film, *Wages of Fear*, dealing with the danger of death among men driving trucks loaded with nitroglycerin, was shown. The individuals who found no reality in the film belonged to the youngest group, 20 to 29 years of age.

• *Science News Letter*, 79:216 April 8, 1961

TECHNOLOGY

Electronics to Speed Up Overseas Communication

➤ **ELECTRONIC** data-processing machines now will be directed to speeding up international commercial communications.

RCA will initiate this use for the first time by 1962, Thompson H. Mitchell, president of RCA Communications, Inc., has announced.

Government officials, both from the military and civilian branches, learned how the computer system will function at a special meeting with RCA representatives in Washington, D. C.

A special data processor that will occupy 3,850 square feet will be fed information in code. It is equipped to handle messages from any channel of communication including transmission from satellites. The processor has the "brains" to identify from the code the type of message sent, the country of origin and its ultimate destination. It is then capable of sending the message by normal transmission channels to its destination.

The machine will have its own built-in inspector or check-up operation to assure accuracy. It also will have a duplicate standby in the event of any technical malfunction.

It operates in microseconds, far faster than presently used transmitting equipment; but it has the intelligence to accommodate its pace to the speed of wire or radio messages.

Jobs will not be lost because of this

newest development in automation in communications, Mr. Mitchell said. "Labor-saving devices cut down operating costs, permit a reduction of rates and an improvement in service for the public. The resulting expansion may mean more jobs rather than fewer ones."

RCA handled 25,000 international messages daily in 1960, as contrasted to 1,000 a day in 1920.

• *Science News Letter*, 79:216 April 8, 1961

MEDICINE

Recovery After Coma And Heart Stoppage

➤ **A RARE CASE** of recovery of a two-and-a-half-year-old boy who was unconscious for two weeks after his heart stopped beating at least five minutes is reported in the *Journal of the American Medical Association*, 175:1102, 1961.

The child, previously healthy, had been hospitalized because of severe bronchitis. When he became worse and was unable to clear the secretions in his throat in spite of medications, he had an operation to open his windpipe (tracheotomy).

Two days after the operation, the circulation collapsed. However, before the physicians could perform a heart massage, the circulation improved.

Treatment included lowering the child's body temperature to 94 degrees Fahrenheit, giving sedation and bringing about cerebral decongestion.

The boy remained in the hospital for 36 days, during which time he acted as though he was learning all things anew. The physicians reported that he was like an infant and was "taught to hold, to grasp, to sit, and similar activities, which he gradually learned over a period of time."

Drs. Max S. Sadove, M. Kemal Yon, Paul H. Hollinger, Kenneth S. Johnston and Frederick L. Phillips of the University of Illinois Research and Educational Hospitals in Chicago are reporting the case.

• *Science News Letter*, 79:216 April 8, 1961

MEDICINE

Syphilis Cases Estimated At More Than a Million

➤ **THE NUMBER** of syphilis cases in the United States is estimated to be as high as 1,200,000, Dr. William J. Brown, chief, venereal disease branch of the Public Health Service's Communicable Disease Center, Atlanta, said.

"This tremendous reservoir of cases," he reported, "can be lessened by treating more cases than are being added." This is currently being done by blood testing large chunks of the population, such as premarital and prenatal groups, those in hospitals, military selectees and those who are released from the armed forces.

Dr. Brown said 120,249 cases of syphilis were reported to the Public Health Service in the year ending June 30, 1960. Many additional cases were treated but not reported, mostly by private physicians. Penicillin is the usual treatment.

• *Science News Letter*, 79:216 April 8, 1961

IN SCIEN

METEOROLOGY

Tornado Damage Studied With Paper Models

➤ **A LABORATORY** study of "paper tornadoes" could possibly cut down the high loss of life and homes in a tornado's path. Scientists at the U. S. Army Electronic Proving Ground, Fort Huachuca, Ariz., are building tornado models that could unlock the secrets of the tornado funnel.

By comparing damage patterns of tornadoes that whipped through certain areas with the models, the weathermen hope to determine building standards that would withstand the tornado's fury.

Ninety different tornado models were built for the study, George W. Reynolds told the American Meteorological Society in Chicago.

• *Science News Letter*, 79:216 April 8, 1961

PUBLIC HEALTH

Human Brain Explored In Cooperative Research

➤ **HOPE FOR TREATMENT** of numerous brain-centered diseases is seen in the pooling of research by a committee of 13 voluntary health organizations.

One in every 16 babies born in the United States suffers from some disorder of the nervous system, and millions of other Americans are victims of neurological and sensory ailments.

Dr. A. B. Baker of the University Hospital, University of Minnesota, Minneapolis, is chairman of the cooperating group that makes up the National Committee for Research in Neurological Disorders.

In a booklet, *Exploring the Brain of Man*, published by the committee, Dr. Baker said that the united effort being made by voluntary health groups holds promise for the future.

"The war on the widely varying disorders of man's brain," Dr. Baker states, "is a vast medical frontier which is rapidly becoming one of the most important research areas in the field of medicine and public health."

A group of voluntary associations and professional societies was instrumental in the creation by Congress of the National Institute of Neurological Diseases and Blindness of the National Institutes of Health in 1950.

This agency now has 285 trainees in clinical neurology in 60 training programs.

A publication of the new committee tells in laymen's language the latest technique and research findings for treating strokes, epilepsy, cerebral palsy, mental retardation, multiple sclerosis and other demyelinating diseases, myasthenia gravis, muscular dystrophy, Parkinson's disease, and disorders of vision, speech and hearing.

• *Science News Letter*, 79:216 April 8, 1961

CE FIELDS

MEDICINE

Ceylon University Study Shows Hazards of Boxing

► **DISORDERED ACTIVITY** of brain waves appeared in E.E.G. (electroencephalograph) records of 30 out of 50 Ceylonese boxers studied at the University of Ceylon in Colombo, three researchers report in the *British Medical Journal*, March 25, 1961.

The scientists state they had previously noticed definite changes in work attitudes among the university boxers.

Some of the best boxers of Ceylon were included in the study. Among the 50 were university, police and armed forces men, along with some of high school age. Some of the boxers had represented Ceylon in the Olympics or other meetings held abroad.

Seventeen, or 34%, gave a history of at least one knockout, while six, or 12%, complained of persistent headaches. Eleven, or 22%, showed loss or impairment of memory.

A comparison, or control, group of 75 university students, who had taken part in other sports but not in boxing, showed only six cases, or eight percent, with abnormal brain wave activity when given E.E.G. examinations.

The investigators said the presence of disordered activity among 60% of the boxers is statistically very significant. They also noted that only 34% had ever been knocked out.

Drs. M. S. Nesarajah, K. N. Seneviratne and R. S. Watson of the University of Ceylon report the study, which was made with apparatus from the Rockefeller Foundation, New York. At last year's annual British Medical Association meeting, a motion asked the Government to declare boxing illegal.

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ROCKETS AND MISSILES

New Frontier in Space Provides Financial Boost

► **PRESIDENT KENNEDY'S** "New Frontier" in United States space research provides a financial boost for larger space rockets sooner.

After a "careful review of the U.S. position in space technology," President Kennedy has asked Congress for an increase of \$125,670,000 over the Eisenhower budget of \$1,109,000,000 (or 11.3%) for the National Aeronautics and Space Administration. James E. Webb, NASA Administrator, said the extra funds are intended "to speed up booster and propulsion components for both manned and unmanned space flight."

The money will make it possible to accelerate by more than a year the launch of Saturn, a liquid-fuel powered space vehicle capable of carrying 19,000 pounds in an earth orbit.

C-2, a stepped up version of Saturn, capable of putting 19,000 to 45,000 pounds into a 300-mile orbit, also will be advanced by the budget increase, Mr. Webb said. It should make its flight in 1966 instead of 1967 as previously scheduled. The Saturn C-2 also is planned for a manned orbit around the moon and a probable soft landing on the moon.

No additional money was requested for research and development of solid-fuel rockets, despite growing belief among Congressmen that building large solid-fuel boosters would more quickly close the gap in booster capability between the U.S. and the USSR. More than \$99,000,000 is allocated to the liquid-fuel rockets Saturn and Centaur and the facilities required, compared with \$3,100,000 for research and development in solid-fuel rockets.

The decision to concentrate funds and effort on the liquid fuel vehicles was the President's, *SCIENCE SERVICE* learned.

In Congressional testimony, one NASA official suggested that \$15,000,000 might be spent by the space agency for solid-fuel research and development.

Dr. Hugh Dryden, Deputy Administrator of NASA, said that solid propellants are used in the upper stages "of almost every flight we make." He said that funds for solid-propellant research were not larger because the U.S. is not yet ready for development of larger solid-fuel boosters.

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OCEANOGRAPHY

Ocean Studied for Atomic Waste Disposal

► **THE ATOMIC** Energy Commission has awarded Columbia University's Lamont Geological Observatory a contract to study ocean waters to determine the effect of atomic waste disposal in the oceans.

The research, scheduled to begin this summer in the North Atlantic near Bermuda, will include studying ocean movements by dropping a common red dye into the ocean at selected sites.

Water will be sampled at various ocean depths by a ship towing a sensitive device that can record as little as two parts of dye to 100 billion parts of water. The device will also contain other instruments for measuring the temperature and depth of the ocean water sampled.

Until the actual mixing, spreading and circulation rates of specific ocean areas are known, no reasonable control over atomic waste disposal in the ocean can be expected, Dr. Maurice Ewing, director of the Observatory and the project, said.

Although the research will cover a small portion of the Atlantic Ocean, the AEC hopes the program can eventually be extended to cover major ocean areas.

The research by the Observatory will be financed by a \$290,000 grant from the AEC. Another contract, involving \$200,000, was awarded by AEC to the Systems Engineering Division of Pneumo-Dynamics Corporation of Washington, D. C., for developing and testing the equipment to be used in the study.

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ROCKETS AND MISSILES

Foreign Cooperation In U. S. Space Research

► **UNITED STATES** space research is developing a French accent.

The French Committee for Space Research (Comite des Recherches Spatiales) will prepare space experiments to be launched in sounding rockets by the National Aeronautics and Space Administration.

A memorandum of understanding between the two organizations also calls for the Comite to design experiments for satellites to be launched by NASA, technical exchanges of equipment and personnel, and training of French space science technicians at NASA science centers.

France also has joined with England to provide ground stations for NASA's communication satellites, Projects Relay and Rebound, to be launched during 1962 and 1963.

The stations will be equipped with advanced radio facilities for conducting tests with active and passive satellites at high frequencies and low power.

Project Relay, scheduled for launch in 1962, is NASA's low altitude active repeater satellite. The space craft will weigh less than 100 pounds and will contain instruments to detect radiation damage and other effects of space environment as well as communication experiments.

Rebound follows Echo, NASA's first passive reflector communication satellite. Under this project, rigid inflated spheres (like Echo) will be placed in orbit in 1963 using a single launch vehicle.

The three cooperating countries will welcome participation by other countries willing to provide additional ground facilities for the experiments.

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ROCKETS AND MISSILES

Space Communication With "Gas" Antennas

► **SPACESHIPS** of the future might communicate with each other by using the exhaust gases fired from rockets as radio antennas.

Ionized exhaust gases are good electrical conductors and can be used to send out and receive messages from other spaceships, Barry Mindes of the International Telephone and Telegraph Corporation Federal Laboratories of Nutley, N. J., reported.

A whole new frequency range for intra-space communication would open up without increasing the weight of space vehicles, Mr. Mindes told the Institute of Radio Engineers International Convention in New York. The long exhaust trail in the sky would act as an antenna for communicating in lower frequency radio bands, which until now have not been used because they require a huge antenna.

The proposal crystallized from a study sponsored by the U.S. Office of Naval Research.

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