

GERONTOLOGY

Being Male Means More Diseases and Shorter Life

➤ BEING a male carries with it the penalty of greater vulnerability to some diseases and a shorter lifespan, Dr. James B. Hamilton of Long Island College of Medicine reported to the meeting of the Gerontological Society in New York.

For the average American man, this means a five-years shorter lifespan than the average American woman has, he said, citing mortality statistics.

But the sex difference in ability to live holds true also, he finds for some 70 other species, from worms, crabs and insects to birds, fish, snakes and mammals.

"This," he said, "warns against the naive assumption that the sex-differing temperaments, habits or occupations of men and women account for a shorter lifespan of males than females or for the tendency of a particular pathological (disease) condition to select one sex."

The fat glands in a woman's skin grow less active with increasing age, but the reverse is true for men, Dr. Esben Kirk of Washington University School of Medicine, St. Louis, reported. His findings were made on measurements of the oily secretion of the skin of the foreheads of some 200 persons over the age of 40.

Aging has no effect on the amount of blood in the body, Drs. Jerome E. Cohen and Nathan W. Shock of the U. S. National Institutes of Health and Baltimore City Hospitals found.

Old age, however, brings a considerable degree of fatty degeneration of the parotid glands, in rats at least, Dr. Warren Andrew of Washington University School of Medicine reported. The parotid glands are best known to the layman when they become involved in mumps.

Science News Letter, January 22, 1949

INVENTION

Roadable Plane Has Detachable Auto Front End

➤ THE OLD problem of the roadable airplane is tackled in a new way by a pair of inventors, Robert E. Fulton, Jr., of Washington, and Octavio J. Alvarez of New York, who have received U. S. patent 2,457,884 on their design.

Essentially, their craft consists of a separable cabin, power-plant and controls, mounted on four wheels so that it looks much like the conventional small car, which can be backed up and attached to a fuselage and pair of high-mounted wings. The latter can be left in the hangar or on the tarmac at the landing field while the operator drives on into town in the roadable front half of the machine.

The same steering wheel serves both in the air and on the ground; it is so geared that its motion can be limited to a part of

a full turn for aileron control or released to make several full turns for steering on the ground. It is also free for push-pull elevator control in the air, but locked against such motion when used for ground steering.

When the craft is being prepared for travel by road, the propeller blades are removed from its nose, but the propeller boss remains in place as an ornament on the front end of the motor-car section.

Science News Letter, January 22, 1949

ANTHROPOLOGY

Life in Wat Bang Chan Studied by Scientist

➤ LIFE in Wat Bang Chan is getting a scientific investigation by an American scientist.

Wat Bang Chan (pop. 1,200) is a village north of Siam's capital city, Bangkok. The life of its inhabitants is being studied by a Cornell University anthropologist, Prof. Lauriston Sharp, who has been in Siam since last July.

The impact of western civilization, war and Siamese government programs on the people of Wat Bang Chan is getting particular attention, Prof. Sharp's first progress report said.

Part of a university program in cultural anthropology, the work in Siam is made possible by grants from the Carnegie Corporation of New York and also is supported by the Rockefeller Foundation, the Viking Fund and the Social Sciences Research Council.

Science News Letter, January 22, 1949

GENERAL SCIENCE

Columbus Was Mistaken For Two Other Guys

➤ THE Hungarian historian who said that Columbus was a Mediterranean pirate fleeing from an assassin when he discovered America was thinking of two other guys.

That is the suggestion of a leading American authority on Columbus, Prof. Samuel Eliot Morison of Harvard University. The two other guys were a French admiral and a Greek pirate. Their being confused with the discoverer of America is an old story, Prof. Morison explains. The Greek pirate, Bissat, and the French admiral, Cazenove, were both variously known as Cazenove, Colon and Columbo.

Any claims that either or both of these characters had anything to do with the discovery of America are termed "all nonsense," by Prof. Morison.

The Harvard historian was awarded a Pulitzer Prize five years ago for his comprehensive biography of Columbus, "Admiral of the Ocean Sea."

Of his subject, he notes, "Columbus, like Lincoln, seems to get particular attention from nuts."

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IN SCIEN

PSYCHOLOGY

"Life with Father" Headed for Extinction

➤ THE traditional type of family in which Dad lays down the law, and Mother does not interfere with his discipline is probably on the way to extinction in America.

This is the tentative prediction of Dr. Hazel L. Ingersoll, of the Department of Child Development and Family Relationships of Cornell University. Her conclusion is based on the study of how 37 families are ruled.

Whether Dad or Mom "wears the pants" in your own family depends at least in part on the sort of families they grew up in, Dr. Ingersoll found.

The man who grows up as a spoiled mama's boy tends to pick for a wife a girl who can take over management of the household, thus reproducing the pattern of his own boyhood home.

And the man, or the woman, who lived a life with father as the dominating figure is inclined to reproduce this pattern in his own marriage.

But if one parent comes from a home in which father was the undisputed boss and the other has had a dominant mother, then there is likely to be conflict between them over bringing up the children, with a resulting divided responsibility and authority. This "equalitarian" pattern of family government is also likely to be handed on to the children when they grow up to have families of their own.

The greatest number of families in the group studied by Dr. Ingersoll were of the type in which both father and mother share in the family responsibility or in which either father or mother led the group but did not dictate.

Details of the study are reported in GENETIC PSYCHOLOGY MONOGRAPHS.

Science News Letter, January 22, 1949

VETERINARY MEDICINE

Elephants Suspected of Spreading Tuberculosis

➤ A POSSIBLE new tuberculosis menace: elephants

The U. S. Department of Agriculture's Bureau of Animal Industry cited the case of an elephant that died of pulmonary tuberculosis at the National Zoological Park in Washington. The Bureau's annual report said the case demonstrated "the possibility that elephants may spread tuberculosis among man and animals."

Studies have indicated that the elephant died of human-type TB.

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CI FIELDS

VETERINARY MEDICINE

England's Dogs Feeling Pinch of Austerity Diet

► ENGLAND'S austerity diet is not only putting its pinch on the people; it is hard on the dogs as well, reports A. Stewart Rich, founder of the London Animal Hospital. As a result of their impoverished diet, English dogs now require nearly double the veterinary care they received before the war.

Effects of dietary deficiency are especially noted in dog breeding, Mr. Rich reports. Puppies have a hard time getting born, due to their mother's poor condition; and after they are born she is often unable to produce milk enough to nurse them.

Bone formation is poor, and rate of growth is retarded as much as 25% during the first 10 weeks of puppy-hood. Fifty percent of the puppies treated at the hospital have been under weight, as compared with only 10% or 15% in prewar days.

Among ailments now prominent among dogs are rickets, slow convalescence after illness, slow healing of broken bones and skin troubles. The latter group of diseases attack well over a third of all dogs brought to the hospital.

A new disease has also appeared. It is known by the technical name of beta-hemolytic-streptococcus, and it has caused greater mortality in English kennels than any other disease. Death rate exceeds that from distemper.

Dog food is sold on a quota basis, and the problem of getting enough is a difficult one for dog owners. When meal or dog biscuit is in short supply, it is mixed with potatoes or some other unsatisfactory substitute.

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GERONTOLOGY

West May Need Chinese Attitude Toward Old Age

► WESTERN NATIONS, with their increasing numbers of old and retired people, may need to adopt some of the Chinese attitude toward old age, Dr. Albert R. Chandler of Ohio State University, advised at the meeting of the Gerontological Society in New York.

"Chinese sages and poets," he said, "have taught that happiness is to be found in tranquillity, moderation, family relationships and aesthetic appreciation of the little things in life. Therefore a healthy old age is considered the happiest phase of life."

The shock of discovering suddenly that one is growing old is a condition doctors

need to be ready to treat as they are prepared to treat other kinds of shock, Dr. Martin Gumpert of New York suggested.

Sudden heart failures, mental breakdowns, emotional unrest, loss of working capacity, unexpected social discrimination or rejection are conditions that can bring on the shock of aging, he pointed out.

"Problem" old people, in the opinion of their juniors in college, are those who have a complaining or difficult disposition, lack contacts outside the home, are not occupied in any way and in some cases are in a community other than that in which they lived before retirement.

Common traits among the old people considered "successful" are hobbies, recreational interests, acquaintances in the neighborhood and community, a cheerful disposition and efforts to be helpful.

The college students' opinions were collected and reported by Elizabeth M. Simcoe and S. L. Pressey of Ohio State University.

The critical age at which aging affects airline pilots' fitness to fly is between 45 and 55 years, Dr. Ross A. McFarland of the Harvard School of Public Health reported.

Hearing tested by the audiogram and keenness of vision and depth perception were studied in hundreds of pilots ranging from 20 to 55 years.

The pilot's fitness to fly, these studies showed, depends on his psychological and physiological status rather than on age in years. It is influenced by the combined effects of aging and the requirements of airline piloting.

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NUCLEAR PHYSICS

Chemist Makes Guess at Atomic Bomb Charge Size

► HERE is one chemist's guess at one of the world's top secrets:

The explosive charge in an atomic bomb is about the size of an indoor baseball but weighs 20 to 30 pounds.

This estimate was made by Prof. J. A. Campbell of Oberlin College, Oberlin, Ohio.

"In spite of all the supposed secrecy about the bomb," Prof. Campbell told a meeting of the Erie section of the American Chemical Society at Allegheny College, Meadville, Pa., "it is easy to show that the explosive charge weighs in the neighborhood of 20 to 30 pounds and occupies a sphere of three to four inches in diameter—about the size of an indoor baseball."

He declared that 10,000 atomic bombs can be made from known deposits of fissionable elements, adding that new deposits are being discovered.

"Any country with a considerable land area is bound to have available to it sufficient stocks of fissionable material at least for bomb production," Prof. Campbell asserted.

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NUCLEAR PHYSICS

Uniformity Featured By New Atom Smasher

See Front Cover

► A TYPE of atom smasher that gives high speed particles at uniform energy is being built by the General Electric Company at the Brookhaven National Laboratory at Upton, Long Island, N. Y.

A 3,500,000-electron-volt electrostatic accelerator, the new machine is of a type which has less power than the more famous cyclotrons and certain other varieties of atom smashers. But, General Electric scientists explain, the electrostatic accelerator gives uniform velocities to individual particles which are valuable for making accurate measurements in nuclear research.

On the cover of this week's SCIENCE NEWS LETTER is shown one of several electro-nuclear machines under construction for Brookhaven National Laboratory. It will be used for a variety of fundamental studies of the atomic nucleus.

According to N. Rohats, engineer who directs work on the machine, electrostatic charges will be carried from one end of the machine to an aluminum sphere at the other end by two moving belts. Not yet installed, these belts will travel between the two long tubes shown in the foreground.

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INVENTION

Propose Radar-Like Uses Of Solar Microwaves

► RADAR-LIKE navigation and orientation without the use of artificially generated radio waves is the truly radical proposal made by Dr. George C. Southworth, research engineer of the Bell Telephone laboratories in New York. U. S. patent 2,458,654 has been issued on this basic idea in various embodiments.

Very short radio waves, of the order of one centimeter in length, are given off by the sun and other stars, Dr. Southworth points out. By using suitable receivers, these radiations can be used to make accurate determinations of the sun's position even though the sky be overcast. Obviously this can be of great value in navigation.

Similarly, there is a marked difference in intensity of very short-wave radiations received by reflection from the sky and from the ground. This can be used in determining the position of an invisible horizon, and even in getting silhouettes of tall buildings, chimneys and other objects projecting above it. Use of suitable scanners, Dr. Southworth states, can even produce recognizable pictures of terrain made invisible by ground fog or smoke.

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