

GERIATRICS

Study Nation's Aged

While the United States is not in immediate danger of becoming a nation of old people, the problems of the aged and meeting their special needs must be studied today.

► THE AGE FACTOR may soon be abandoned as a retirement-determinant. The emphasis may swing to individual usefulness.

If this switch occurs, the medical profession will be called upon to play an important role in determining which individuals are mentally and physically capable of continuing work as they grow older, the director of the Center for Aging Research at National Institutes of Health, Bethesda, Md., has said.

Some new factors in the process of aging have evolved in recent years, Dr. G. Halsey Hunt told a group attending a meeting in Chicago of the Merrell Symposium on Aging. One of them is the fact that industrialization, urbanization and interdependent living have changed the pattern of life within a few years. Advances in medicine and allied fields during the same period have eliminated or controlled many of the old causes of death in infancy, childhood and early adult life. Therefore, more people are living into middle age.

One of the problems introduced by increased industrialization and urbanization is the lack of employment opportunities for older people. Elderly people tend to be

squeezed out of production work, with serious economic and psychological consequences.

In addition, many organizations have initiated retirement plans which encourage and sometimes force people to retire from work at specific ages. As a result, three-generation living is more difficult economically and less acceptable socially. We now have to pay increasing attention to the problems of caring for older people who cannot live by themselves even if they have sufficient money to pay the rent and grocery bills, Dr. Hunt said.

There were 14,700,000 persons over 65 years of age in July, 1957, compared with 12,200,000 in 1950. During the 1950's, this group has been increasing by about 350,000 yearly.

"While it is important to realize that we run no risk of suddenly becoming a nation made up entirely of old people, we cannot dismiss the problem lightly," Dr. Hunt said. Since older people require medical and institutional care out of proportion to their numbers, there will be increasing strain upon the traditional methods of providing medical and hospital care for old people.

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GEOPHYSICS

Meteorite Landing Dated

The Carbo meteorite has been dated by a study of its chemical composition and found to be more than 2,000 years old. It was found to contain no argon-39.

► A METEORITE'S chemical composition has been measured to show the heavenly fragment fell to earth more than 2,000 years ago.

Dr. E. L. Fireman of the Smithsonian Astrophysical Observatory, Cambridge, Mass., reported the new age measurements to the American Geophysical Union meeting in Washington, D. C. He said the time of fall of the Carbo meteorite was found from the helium-three it contained combined with the fact it contained no argon-39.

Dr. Fireman also reported he has measured the argon-39 content of the Sikhote-Alin meteorite, the first time this radioactive chemical had been measured in a meteorite.

Both helium and argon are rare gases present in meteorites as a result of nuclear reactions of cosmic rays. Measuring these chemicals yields information concerning the history and origin of meteorites, which are the only samples from outer space available to earthbound scientists.

Weathermen attending a joint meeting of the Geophysical Union and the American Meteorological Society learned of a new way to discover and trace turbulence in the atmosphere. Drs. Roscoe R. Braham Jr., E. L. Harrington and T. E. Hoffer of the University of Chicago reported that changes in the air's refractive index show its turbulent motions more accurately than other methods.

Dr. John A. O'Keefe of the U. S. Army Map Service told geodesists, scientists concerned with measuring the earth's size and shape, that orbits of satellites would have to be much higher than at present before observations of the objects would be valuable for mapping purposes. He said a special committee had recommended a 600-mile height as the minimum distance for the satellite's orbit.

The earth's crust under the Andes Mountains appears to be highly irregular, Dr. Merle A. Tuve, director of Carnegie Institution's Department of Terrestrial Magne-

tism, reported. He said studies of seismic records showed the roots of the Andes appeared to reach down about 33 miles. This is less than would be expected from their great heights, and confirms measurements showing the crust under the Rocky Mountains is also shallower than expected.

Dr. Cecil A. Nanney of the U. S. Naval Research Laboratory reported that microseisms increase before the occurrence of many large earthquakes and decrease afterwards. Dr. Nanney also found indications the direction in which microseisms are propagated may be associated with the location of significant earthquakes.

A new method for dating archaeological specimens was described by Drs. Irving Friedman and Robert L. Smith of the U. S. Geological Survey. They measured the thickness of the hydrated layer in thin sections of obsidian artifacts to date objects as old as 27,500 years.

Two Harvard University scientists proposed a new method for studying the earth's structure by pounding the earth to produce slight vibrations detectable by receivers thousands of miles away. Drs. Thomas Gold and Donald H. Menzel, director of Harvard College Observatory, suggested using a mechanical vibrator that would drive a shaking platform holding as much as hundreds of tons of rocks. This would produce seismic signals at frequencies of 10 to 100 times per second.

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PHYSICS

Claims Poorer Nations Shake Off "Myth"

► THE BLOOM is off nuclear energy for most of the world's underdeveloped nations.

This is the opinion of Dr. Stevan Dedijer, the Yugoslavian scientist who lost his job after writing an article for the *Bulletin of the Atomic Scientists*. (According to the Yugoslavian Government, it was not because of the article.)

Now, in an article for the current *Bulletin* (May), Dr. Dedijer discusses the "nuclear myth" that worked its spell on many underdeveloped countries and lulled them into thinking they could jump from the "wooden plow age into the nuclear age."

These countries based their hopes on an exaggeration of the role of nuclear energy in fostering development. They failed to foresee the cost and need for know-how. The result, he writes, is that this "nuclear myth" is now dead or dying.

"Where the myth has had a powerful grip on the community," Dr. Dedijer declares, "it may be one of the important factors that leads to a postponement for many years of the development of a research policy. Many a country having a powerful nuclear energy commission does not have a commission for research in agriculture, medicine, industry, or transport to fight for its share of the research cake, or a general body to study and advise on problems of the strategy of research development."

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