

ANTHROPOLOGY

Primitive Skulls Declared Equivalent to Advanced Forms

"ALL MEN are created equal." Thomas Jefferson boldly pronounced this fundamental dogma of democracy as self-evident.

Since his time, apologists and rationalizers have been much occupied in shaving and chiseling off the edges and corners of this "hard saying," until we are left with a diluted doctrine based on oblique admissions of self-evident natural inequalities.

Comes now a world-known scientist, Dr. Eugene Dubois, discoverer and describer of *Pithecanthropus erectus*, Ape-Man of Java, most primitive known fossil human species (if indeed it is human), and bolder even than Jefferson declares a natural and physical parity between the two most widely different of living races. The proud white man of Europe and the poor, vanishing black of Australia, "lowest" of living human stocks, achieve closely equivalent ratings for their respective brain sizes when measured by a yardstick of his devising.

Not that Dr. Dubois claims absolute equality in cranial capacity. European white men average 1450 cubic centimeters skull content; white women 1300. Australian black males average slightly less than white women in cranial capacity; their women have a cranial content of a little under 1150 cubic centimeters.

These measurements, however, Dr. Dubois designates as only "apparent cephalizations." To obtain a figure representing a "real cephalization," it is necessary to take into consideration the body which the brain is called upon to manage. One must introduce into the formula factors representing bodily height and weight, and especially size and relative strength of the muscles.

The Netherlands anthropologist first obtains cranial justice for the white woman. After allowing appropriate weighings for the lesser female size, smaller and softer female muscles and other factors requiring compensation, he comes to the conclusion that "it appears to be proved with certainty, that the real cephalization of woman is equal to that of man."

Turning then to the humble black brother of the Australian bush, he gives him the benefit of the same allowances for less height, inferior physique and

smaller muscular strength. Again the outcome is that "the real cephalization of the Australian aborigine is equal to that of the European."

But Dr. Dubois' doctrine of fundamental human equality, at least so far as head-body ratio is concerned, is even more sweeping. Calling attention to the establishment of similar parities in real cephalization among white men, Japanese, Eskimos and the extinct Neanderthal race, he concludes: "It again bears evidence thereof that man did not gradually progress in human organization, but came into existence as one finished genus, and that indeed all the multiform types of man, in the present and in the past, belong to one and the same stage of natural animal organization."

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ELECTRICITY

World's Tiniest Motor Built by Russian Youth

AN ELECTRICAL motor built in ten days by a 21-year-old Moscow student is now the smallest machine of its kind in the world. Dwarfing other tiny motors, it is about the size of a large fly. It weighs only .37 gram.

Constructed by Yuri Yuremin, a student at the Moscow Institute of Non-Ferrous Metals, it consists of 31 parts. A four-volt pocket-flashlight battery can

operate it, and it can also run on regular city current reduced in voltage by a transformer.

The current-carrying parts are of brass, and all insulating parts are ebonite. Aluminum rivets fasten it to a celluloid base. The armature measures about .16 inch across, and has 380 windings of wire not quite .002 inch in diameter.

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ASTROPHYSICS-METEOROLOGY

Cycle of 23 Years Dominates Heat and Light of Sun

RADIATION of heat and light from the sun fluctuates in twelve distinct cycles, but among them the dominant one is a 23-year period. A great variety of events on earth follow this 23-year cycle, ranging from the floods of the Nile to the abundance of codfish.

An analytical study of the sun's cycle activities, carried on for many years by Dr. C. G. Abbot, secretary of the Smithsonian Institution, has been brought to completion and has been published in a special bulletin of the Institution.

The superposition of cycles in solar radiation presented great difficulties in their analysis and study, for sometimes they coincide, giving great stress to their effects, and sometimes they run against each other, resulting in mutual cancellation. However, continual refinement of instruments and growing skill in observation, combined with new methods of statistical handling of the results, have enabled Dr. Abbot to unsnarl what at the beginning looked like a hopeless tangle of data.

Dr. Abbot is proceeding with great scientific caution in the application of his results to the problem of long-range



TWO FLY-POWER MOTOR