

"femininity" in the atmosphere of a head-hunter community. When he visited the Jivaros, he had at first the vague, subconscious sensation of living in a woman's world. This strangeness did not wear off for several days.

Early Spanish and Portuguese explorers who caught glimpses of the Jivaros must have thought that the warriors were women. That accounts for

their naming the Amazon River, under the mistaken idea that these Indians were women warriors, like the famous Greek Amazons.

The ladylike dress and manner of the Jivaro head-hunter, like his head-hunting proclivities, are long-established customs. There is nothing "sissy" about the Jivaro male beyond his appearance, says the ethnologist.

Science News Letter, June 10, 1933

POPULATION

Industry Must Adjust Itself To Country's Slowing Growth

New Study Points to 17,000,000 Increase of Past Decade, 10,000,000 Present and Smaller Increments For Future

AMERICA is slowing down in her mad pace of increasing numbers.

In the year 1860 the population of the United States was eight times as great as it was in 1790, 70 years earlier. In 1930 it was four times as large as in 1860, also 70 years earlier. But in 2000 it will not be even twice the 1930 figure.

A million a year. That is the estimate of population growth just issued by two students of the statistics of population, Dr. Warren S. Thompson, director of the Scripps Foundation for Research in Population Problems and his associate, P. K. Whelpton. (McGraw-Hill)

Industry will need to adjust itself to this slower space, it is pointed out.

"Clearly an increase of 10,000,000 persons from 1930 to 1940 will demand less new housing than did the increase of 17,000,000 from 1920 to 1930. Also the smaller increase will require fewer new schools, factories, stores, and offices."

Industries will feel the effects of an approaching stationary population in proportion to the degree that they have a stable product or have already reached the saturation point.

"It is hard to conceive that the average family would use two radios or two kitchen stoves, for example; but the present radio may be replaced by an improved model at any time, while the kitchen stove is likely to be kept until worn out," the investigators indicate. And demand for necessities of life such as food, clothing, and shelter will expand less rapidly with rising incomes than demand for conveniences and luxuries.

But there are other industries, and

these probably produce the majority of all industrial goods, that are relatively independent of population growth. They could sell their products in increasing quantities and improving qualities, regardless of population increase, if only the public had the money to buy.

To these industries, the raising of the per capita purchasing power of the public will be an ever-increasing concern.

Another industrial problem is foreseen by the investigators in the decrease in size of family and the consequent increase in opportunity for savings by the heads of families. Since savings, in general, are invested in some form of business enterprise, capital may be increasing most rapidly at just the time when the number of persons for whom necessities must be provided has been increasing most slowly.

"In this manner the decline in the birth rate has contributed directly to the lack of balance in the industrial system which is in part responsible for the present troubles.

"It is not the intention of the authors to suggest that slower population growth has brought on the present depression; although the decline in annual growth since 1923 may have been a contributory factor. But because 'business as usual' has been predicated to such a large extent on a rapidly growing population in the past, it is reasonable to urge that the change in the rate of population growth now going on, and to be expected in the future, be given careful consideration in planning for the rationalization of social and economic life."

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PSYCHOLOGY

Cause of Happiness Sought By Psychologist

HOW CAN WE find happiness? This question, about which philosophers have speculated for ages, is now receiving scientific study by psychologists. Happy and unhappy college students have served as subjects for tests reported by Dr. George W. Hartmann of the Pennsylvania State College, to the Association of Consulting Psychologists.

Emotional stability, or a lack of neurotic tendency, is the most important single factor leading to happiness, he found. Nevertheless, enthusiastic mental hygienists will be disappointed in the finding that emotional health is far from the sole producer of happiness.

"The dominant individual apparently has slightly greater chances of being happy than the submissive person, a finding which is hardly comforting to an advocate of traditional Christian ethics," Dr. Hartmann said.

The "rugged individualist" is no more likely to be happy than the "clinging vine"—another upset to common opinion.

The ideal of the individual seems to have no relation to the extent of his happiness. No indication was found that adherence to orthodox religious beliefs makes for greater happiness.

No connection was found between intelligence and happiness, not even the inverse relation that some cynics have claimed. And neither high or low interest in the career being trained for, appears to be related to happiness.

Most of these college students studied consider themselves happier than the average, but Dr. Hartmann suggests that perhaps the average man considers himself also happier than average.

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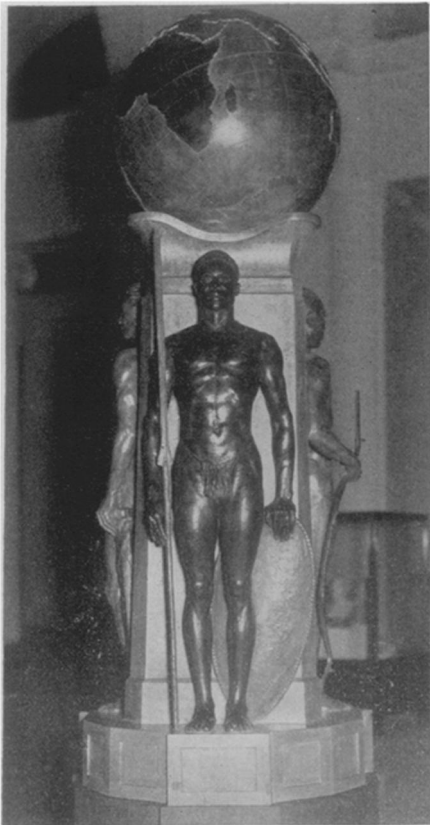
ANTHROPOLOGY

Racial Hall of Fame Opened In Field Museum

THE FINEST racial portraiture that the world has yet seen.

This is the high praise bestowed by Sir Arthur Keith, eminent British anthropologist, on the new gallery of bronze statues which has just been opened at the Field Museum, Chicago. The hall is known as Chauncey Keep Memorial Hall, in honor of a former trustee of the Museum.

The bronzes, representing the world's



WHITE, BLACK, YELLOW

peoples from the highest to the most primitive types, are the work of Malvina Hoffman. To seek living models who would represent little known tribes, Miss Hoffman traveled around the world.

The sculptor caught many of her subjects in lifelike poses. A bronze Hawaiian balances lightly on his surfboard. A native of the Australian bush stands poised to hurl his death-dealing spear. A lady of India shows the reserve of her class and culture. And farther on is an "untouchable" old woman of India, in sharp contrast. Some of the human types hunted out and modeled for this anthropological collection are said to be on the verge of extinction.

One monument, entitled "The Unity of Man," expresses the idea of man as a well-defined, fundamentally uniform species which has spread over the earth. It portrays in bronze three human types, white, yellow, and black, each man representing the highest physical development of his race. Each carries his weapons: the white man a sword, the yellow man bow and arrows, the black man a spear and shield. The pillar which the men encircle is topped by a globe.

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ASTRONOMY

Contents of "Empty Space" Revealed by Colors of Nebulae

Yerkes Studies Indicate That So-Called Void Contains Particles of All Sizes, Some as Large as Speck of Dust

"AS EMPTY as interstellar space," is a comparison that needs revision as a result of recent researches made at Yerkes Observatory, Williams Bay, Wis. For the gigantic voids between the stars that shine in the night sky are not truly empty. They are filled with an extremely tenuous cloud of fog, which contains so close to nothing that it would be pronounced perfect as a vacuum by a physicist if it were here on earth.

Astronomers know that there is something in the space that seems to be empty because the light of distant stars is dimmed and reddened in its passage through space. This was shown by Dr. R. J. Trumpler of the Lick Observatory as well as by observations made with the Yerkes 40-inch telescope. Distant stars appear somewhat more ruddy than the ones nearer to us. This suggests to the astronomers that interstellar space has an effect like that of the atmosphere of the earth upon the sun's rays. When the sun is near the horizon its rays look red because they must travel through a thick layer of air.

But do not suppose for a moment that the light that is scattered by the air is lost, for it is not. The light subtracted to make the redness of the sunlight reappears as the blue of the sky. The compensation is so exact that it can be figured out theoretically.

Applying a like reasoning to interstellar space and its particles, Dr. Otto Struve, director of the Yerkes Observatory, considered what effect the space reddening of the starlight should have on the space surrounding the stars. It would cause a faint general illumination of space, a slightly radiant screen of the heavens upon which are projected the more luminous images themselves. Dr. Struve computed just how much this background illumination should be expected to contain. The result surprised him.

The total amount of light produced by space should be greater than that of all the stars combined and the color of

this general illumination should be as blue as the bluest daylight of the sky. That the night sky is actually bright and not dark can be easily proved by any observer situated far from city lights. When the eyes are sufficiently adjusted to the dark, the sky appears faintly luminous between the stars and the outlines of nearby objects, such as trees or houses, can be easily perceived.

In certain regions of space, near luminous stars, the interstellar fog may be illuminated so much that these regions appear even brighter than the rest of the sky. This would especially be true if a local condensation in the interstellar fog happens to be near a bright star. It can then be photographed with a telescope because of its great luminosity and it is seen projected as a bright spot upon the faint general sky illumination.

Such spots are called nebulae. The composition of these nebulae is not fully understood. Some of them scatter the light of the stars and their luminosity is therefore due to reflected or scattered star-light. (Turn to Page 364)

ARCHAEOLOGY

Exposition to Show Monte Alban Jewels

ONE OF Mexico's most treasured archaeological possessions, the famous collection of Indian jewels from the treasure tomb at Monte Alban, will arrive for exhibit at the Century of Progress fair, June 20.

The jewels, property of the Mexican government, will be displayed in a car of the Mexican Presidential train. There are more than 500 pieces of ancient Indian jewelry in the collection.

The tomb was discovered last year by Dr. Alfonso Caso, Mexican government archaeologist, in the mountains of the state of Oaxaca. Splendors of this prehistoric American tomb have been compared with the contents of Tutankhamen's tomb in Egypt.

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