Honor of the Discovery of America to the Ancients." And present day science would nod assent to that.

Nor did the seventeenth-century Englishman think much of another popular theory: that the Lost Tribes of Israel became American Indians. Why, asked Ogilby, would they forget their laws, language, and ceremonies in America, when the rest of the Jews "observed nothing more strictly in all parts of the earth?"

After destroying a string of such theories, the writer arrives at one he can champion. America, he concludes, was inhabited long before the Israelites; in fact, soon after the Flood. And that, in seventeenth century thinking, was equal to saying that the first inhabitants got to the New World early in human history.

Disposing of Europeans and Africans as possible "first Planters of America," he declares for the theory that the first Americans came from Asia. He calls them Tartars. Tartary faces America, and the two lands are probably separated only by northern straits. He thinks perhaps they may even join in the unknown Far North—as, in fact, they come near to doing at Bering Strait, where the gap of less than 50 miles is dotted with stepping-stone islands.

Ogilby, in short, decides that the first Americans came from Asia and came before the great civilizations of the Old World. And that is the verdict of science, 1936.

Science News Letter, August 22, 1936

PHYSIOLOGY

Longer Life Amidst Noise But Bad Effects Noted Also

Experiment in Pressroom of Tokyo Newspaper Indicates Rats in Noise More Nervous, Grow Less, Have Few Young

IN THE midst of campaigns against noise, two Tokyo scientists have discovered that white rats kept in an excessively noisy environment have a longer life span than those sheltered from abnormal sound.

Dr. Yoshitomo Fujimaki and Dr. Kunitaro Arimoto, both of the Tokyo Hygienic Laboratory, would doubt whether silence, after all, is good for animal organisms, were it not for the fact that their experiments also revealed that white rats living in the midst of noise were more nervous, grew less, had less fertility and a greater infant death rate than those kept under normal conditions.

They began their experiments in 1930, conducting them exhaustively. In a spot under an elevated railroad over which 1,283 trains roar daily, they put 20 white rats to live. This group was more nervous and ate less (although more frequently) than the 20 rats living in normal surroundings. Their growth was 76.7 per cent for the male and 64.8 per cent for the female, taking the growth of the sheltered rats as 100 per cent; and their increase was 25 per cent, while that of the other group was 80 per cent. Also their young had a much higher death rate. But, strange to say, the rats under the railway lived 53 days longer in the aggregate than those sheltered from sound. Dr. Fujimaki calculates that a day in the life of a white rat is the equivalent of a month in the life of a human being.

These scientists repeated their experiment twice after that, and the results were practically the same. The second time they placed one group of the white rats in the pressroom of the *Nichi Nichi*, a Tokyo daily newspaper. The third time, they kept one group in a room in which a bell buzzed continuously, while the other group was housed in a sound-proof room. Each time, the group living in the midst of loud noise had a longer span of life than the sheltered group, although they were more nervous, grew less, had fewer young, and suffered a greater infant mortality.

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PHYSIOLOGY

"Dogs Got Rhythm" and Thyroid Feeding Peps It Up

"DOGS got rhythm"—and they have even more after they have been fed thyroid glands. Such is the indication of a discovery by Drs. N. Kleitman and S. Titelbaum, two University of Chicago physiologists.

The scientists first taught their dogs to show they had a sense of rhythm by lifting the same foot every time they heard a metronome beating one hundred times a minute. Each time the metronome was operated at this speed the dogs, placed in a small wooden enclosure for the duration of the lesson, received a small electric shock in one hind leg, until finally they learned to avoid the shock by raising the leg as soon as the metronome signal was heard. Since their legs were not shocked when the metronome was run at other than the one hundred a minute beat, the dogs learned to respond only to this.

Test Rhythm Sense

When their training was complete the dogs underwent a three-day final examination. The metronome was run at the correct rate several times during each day, to be sure that the dogs would respond properly. Five experimenters, each working independently with his own dog, carried on the work.

Now the dogs were tested with the metronome running at various speeds, the one to which they had been trained to respond, and others as close to this as they could distinguish. Careful records of just how accurate was each dog's sense of rhythm were kept.

Then the dogs were fed thyroid gland material. They showed they had a better sense of rhythm on this medication by not responding as often as before to beats close to the one hundred a minute one to which they had been trained. Furthermore, they moved their legs more energetically in response to the correct beat while on thyroid.

Superior Animals

Two of the animals had a superior rhythm sense, and made especially good grades in their tests even when not given any thyroid. These showed no improvement on administration of thyroid. Normal animals grew fatigued toward the end of each experimental period of 5-10 days and got poorer grades at the close of each one. But the thyroid dogs appeared only to hit their strides as each trial progressed, and made better showings towards its end than at the beginning.

The object of the study was not to find out about dogs' rhythm but to learn whether or not thyroid affects conditioned reflexes, such as that set up in the dogs, and differentiating ability, such as enabled the dogs to distinguish between the different rhythms.

The study just reported is part of a study of sleep. The scientists hope to learn what part conditioned reflexes and differentiation may play in sleep.

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