

set-back in Dr. Carpenter's studies. Performance of muscular work did not hasten materially the disappearance of alcohol from the bodies of the men who drank measured amounts of alcohol for Dr. Carpenter's experiments. An hour's work on the ergometer did not work off all the alcohol, his measurements showed. The only effect work or exercise could have would be to remove some of the alcohol by simple vaporization through the breath. But not very much alcohol is dissipated this way. Dr. Carpenter said that any such attempt to remove alcohol through increased ventilation "would require a perfect whirlwind through the lungs in order to be really effective in diminishing the amount of alcohol in the body."

Getting rid of alcohol by drinking large amounts of water also does not, in the light of Dr. Carpenter's experiments, seem a successful method. Gallons of water would have to be taken immediately after the alcohol, he found,

in order to flush the alcohol out of the body. The amount of alcohol gradually diminishes by itself, he explained, and "there would be no point in taking large quantities of fluids when the alcohol had reached a low point."

Other interesting points about alcohol were described by Dr. Carpenter. It is absorbed very rapidly, distributed very rapidly through the body, and has the unique characteristic of being identifiable in the body as long as any of it is left. Alcohol furnishes energy, the amount being between that furnished by fat and that furnished by sugars and starches. It can get into the body without being drunk, being very readily absorbed from the air by breathing. Dr. Carpenter made use of this characteristic in some of his studies with chickens. The chickens were placed in an atmosphere saturated with alcohol so that they inhaled some with each breath and thus accumulated it in their bodies.

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of Minnesota Man's antiquity will give America a longer human history than some scientists have been willing to concede. It has been one theory that man did not arrive in America via Bering Strait until after the last ice sheet retreated, clearing the way. To reconcile this theory with the evidence that hunters in this country actually shot mammoths and other Ice Age animals, it has usually been suggested that the animals survived their own glacial era, perhaps by some thousands of years.

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PSYCHOLOGY

Fascist Attitudes Found In America's Midwest

A PARALLEL between conditions in Italy and Germany that brought Fascist dictators to power and present conditions of thought in the United States has been traced by a psychological study just made public.

Using an "opinion scale" made up of the same questions found to be revealing in a study of Fascism in Germany and Italy, Dr. Ross Stagner, of the University of Akron, has studied the political ideas and prejudices of about 500 men and women from the Main Streets of America. Of these about 100 were college students, 100 adults from rural Minnesota and about 300 from the Chicago region, including unemployed persons, shop workers, office workers, and business and professional men of all kinds.

Direct questions like "Are you a Fascist?" or "Do you approve of Nazi Germany?" had no place in the tests for there is too much stereotyped thinking about Fascism in Nazi Germany and in Italy, Dr. Stagner found.

"Seventy-three per cent. of the population endorsed a position of strong disapproval (of Germany)," he said. "Most of this 73 per cent, did not know anything about what has really happened in Germany. They have heard certain atrocity stories—many are Jewish, and know personally of the persecution of their relatives—and without further ado they indicate strong disapproval." (*Jour. Social Psychology*, Nov.)

A more subtle method was used by Dr. Stagner to elicit the true opinions of the individual. "Opinions about the Depression" was the title of a list of statements for which each person was asked to indicate agreement or disagreement.

First on the list was the innocuous comment that "Conditions are likely to

ARCHAEOLOGY

Earliest American Girl Was Drowned, Not Stabbed

AMERICA'S oldest murder mystery is closed.

Drowning was the fate of the earliest known American girl, who died while out on a Minnesota lake. The accident happened about 20,000 years ago, according to the date estimated by Prof. A. E. Jenks of the University of Minnesota, and the girl's skeleton he pronounces the most ancient human remains yet revealed on this continent.

When dug up in 1931, the girl's skeleton was marked by a cut in the right shoulder blade, and this was thought to be the death wound caused by dagger or arrow. A dagger was found near the skeleton.

Now, however, in a formal published report on the skeleton, which he has studied with great care, Prof. Jenks announces that the shoulder cut proves to have been made by a shovel during the first rescue work. The Minnesota girl came to light when state highway workers struck a layer of silt formed in the last stages of the glacial age, and found in it bones of a human being.

The skeleton continues to be known for convenience as Minnesota Man, Prof. Jenks explains, since that name has become attached to it, but there is

definite evidence that Minnesota Man was a girl. Various traits of body and skull testify to the sex.

When she died, the girl was about 15 years old, Prof. Jenks concludes from the fact that she had cut all teeth except the wisdom teeth, and from the still immature state of the long bones of the body.

The teeth of this early American girl are larger than those of ten Old Stone Age types famous in scientific records.

Prof. Jenks sums up that the traits of the skeleton "proclaim it to be a primitive *Homo sapiens*, of an early type of evolving Mongoloid, already prophetically suggesting American aborigines, especially the Eskimo, more than the present Asian Mongoloids."

Geological evidence for the time when the girl lived and died is summed up in the report by Dr. George A. Thiel of the University of Minnesota. He regards glacial Lake Pelican, where the skeleton was found, as about 2,000 years older than famous Lake Agassiz of the glacial period, and therefore the skeleton and its earthen bed are assigned to an antiquity of 20,000 years.

If generally accepted by geologists and anthropologists, this interpretation

get better during the coming year," which was merely a blind for the real purpose of the inquiry. Here are a few of those that really did bring out the trend of thought in the group

"The people who complain most about the depression wouldn't take a job if you gave it to them." "Most people on relief are living in reasonable comfort." "The government must first balance the budget." "Unemployment insurance would saddle us with a nation of idlers."

Sympathetic attitudes toward Fascist doctrines, it was found, are strongest among the wealthy and among the poor. The opposition is in the middle class—those with a family income between \$1,000 and \$5,000. Dr. Stagner sees in this fact a parallel with conditions in pre-fascist Italy and Germany, before the conversion of the middle classes to Fascism.

"In both Germany and Italy, the middle classes (land owners, retail business men, small manufacturers and well-to-do professional groups) found themselves threatened by a growing monopoly capitalism from above and a growing revolutionary disposition from below which presaged the abolition of all private ownership of capital goods," he said.

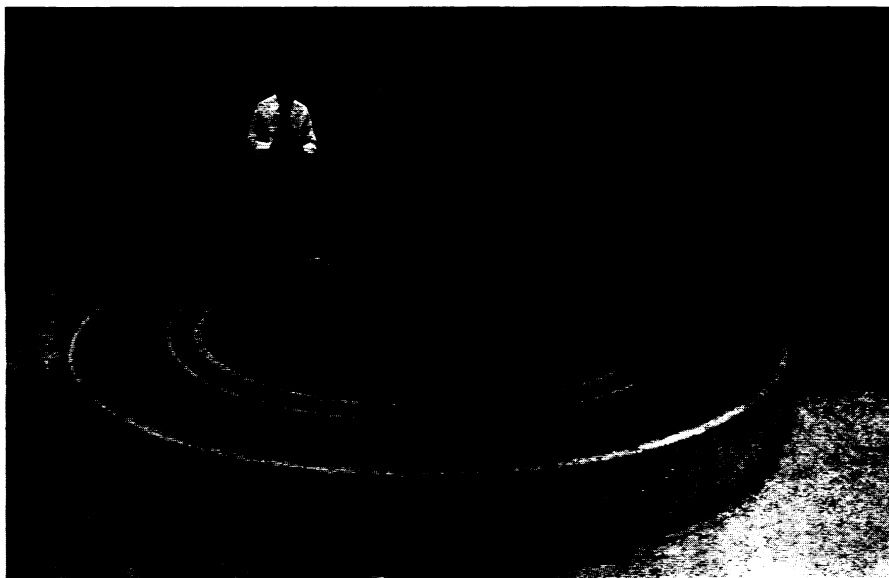
"These economic groups attempted to defend themselves by dictatorship, by breaking up labor unions, by attempting to regulate monopoly capital, abolishing political parties and building up intense nationalism. The finances for these movements have been shown to come from the upper income groups and the 'fascist militia' from the lowest income groups, in interesting parallel to our observations.

Effective Here

"It will be recalled that it was by holding up the bugaboo of political radicalism as a threat to the status of the middle class that both Mussolini and Hitler obtained power," Dr. Stagner added. "It is more than apparent—it is striking—that the same technique will be very effective in this country."

What Americans make up the group of those sympathetic to Fascism? Generally they are the small business man, the office worker, the high-class professional man, the home owner, Dr. Stagner found. Politically, the old-time Republican supporter of Hoover is most likely to have a Fascist leaning. Next come the supporters of Roosevelt. Last come the Socialists and Communists.

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ROUND AND ROUND

ENGINEERING

Going in Circles But Really Getting Somewhere

THE POPULAR belief that you never get anywhere going around in circles is being disproved at the Arlington testing laboratories of the U. S. Bureau of Public Roads, where two automobile wheels rotating on the surface of a small circular track are revealing the relative stabilities of various low-cost road surfaces. There are two of these apparatus, one indoors and the other out, with five or six sections of different bituminous mixtures making up the surface over which the wheels rotate.

Tests are made of one variable factor at a time, such as the quantity or the consistency of the bituminous mixture, and are run until the relative wear on each section reveals the comparative stabilities which result with regard to the several circumstances of the variable. The wheels, which exert a force of 800 pounds on the road surface, are mounted on the ends of a centrally pivoted steel beam which can be driven at three speeds, the maximum being 9 miles per hour.

The track itself, laid in a concrete trough, is approximately 37 feet in circumference, 18 inches wide, and has a mean depth of 12½ inches. Distribution of the "traffic" over the width of the surface during compaction is made pos-

sible by shifting the pivotal point of the steel beam back and forth by means of a hand-operated wheel, or, in order to accelerate the tests by simulating conditions of high traffic density, the pivotal point may be set off center so that the wheels travel in two concentric lanes 5 inches apart.

The surfaces may be tested dry or flooded, or the subgrade, which consists of gravel or crushed stone, may be kept moist by the capillary introduction of water through the base of the inner wall of the track.

From the effects produced on the test specimens by these revolving wheels, which travel about 8,000 miles per year, engineering improvements are being developed which the motorist will realize in the construction of better highways.

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Wild turkeys were so plentiful in ancient Mexico that the Aztecs fed 500 turkeys a day to birds of prey in the zoo at their capital.

The Swedish match industry is offering a new waterproof match head in which synthetic resin is used as the binder for the inflammable composition.