

thousand Chinese perished, occurred in Kansu, and within eighteen hours its location had been determined and the statement made that loss of life and property would probably be very heavy. At the end of July a missionary priest finally found his way through a ruined and bandit-infested region to a telegraph wire and sent the first verbal confirmation of the scientists' prediction.

Similar "beats" have been scored by scientists and seismographs over reporters and telegraphs in several other notable earthquakes during recent years. Data for these reports are gathered by Science Service and interpreted by the U. S. Coast and Geodetic Survey and the Jesuit Seismological Association, acting in cooperation with many seismological observatories in universities and other institutions in the United States and foreign countries.

Science News Letter, February 18, 1933

One of the most impressive looking agricultural implements is a combination corn picking and husking machine which handles two rows of corn at once, and does the work of a large force of men with only two or three attendants.

With the decline in quality of the iron ore of Great Lakes region, one engineer foresees that it will be necessary to import high grade iron ore from South America to mix with the local product and thus preserve the industry of the Lake states.

The National Conference on Merchant Marine was told that less than ten per cent. of the American merchant fleet is new, that is, built since 1922, whereas the fleets of Germany, Norway, Great Britain, Holland, and Sweden are more than 50 per cent. modern and new.

ECONOMICS

Industrial Survey Necessary Prelude to Technologic Rule

This is the fourth article of a series presented to illuminate the backgrounds and objectives of the movement that has found expression in the discussion of Technocracy. The material is given as information and news, not as our opinion or with our endorsement. The next article will give Professor Soddy's views on money, banks and currency.

THE ORGANIZATION of a suitable self-selected group of economists and technicians.

An inquiry into available ways, means and personnel.

A working-out of a common understanding and solidarity of sentiment between technicians and labor.

These are three essential practical steps listed by Thorstein Veblen when in 1919 he visualized a "soviet of technicians" that might rule the nation.

The organization of Technocracy in New York that has captured public imagination is believed by some to be an actual attempt to work out the first two of these steps.

In addition to the self-appointed organization of technicians, their charting of the nation's needs in industry, and the marshalling of technically trained men and women to operate the wheels of civilization, Veblen saw the need of an extensive campaign of inquiry and publicity that would bring to the underlying population a reasonable understanding of what it is all about. An-

other prerequisite of any overturn of the established order of absentee ownership is the active adherence of the trained workmen in transportation and the mechanical industries.

How would the technicians take control, once they are ready to act? Veblen suggested "a conscientious withdrawal of efficiency, that is to say the general strike, to include so much of the country's staff of technicians as will suffice to incapacitate the industrial system at large by their withdrawal, for such time as may be required to enforce their argument."

"By themselves alone," he wrote, "the technicians can, in a few weeks, effectually incapacitate the country's productive industry sufficiently for the purpose. No one who will dispassionately consider the technical character of this industrial system will fail to recognize that fact. But so long as they have not, at least, the tolerant consent of the population at large, backed by the aggressive support of the trained working force engaged in transportation and in the greater primary industries, they will be substantially helpless to set up a practicable working organization on the new footing; which is the same as saying that they will in that case accomplish nothing more to the purpose than a transient period of hardship and dissension."

Wealth From Energy and Diligence

The production of wealth, as distinct from debt, demands a continuous supply of fresh energy and continuous human diligence, nowadays, rather than physical labor.

This idea was put forth by Prof. Frederick Soddy, eminent British chemist and Nobel prizeman, in his 1926 book, "Wealth, Virtual Wealth and Debt."

Prof. Soddy is called a prophet of Technocracy. The Technocracy movement has emphasized the basic nature of energy in the machine age, but it has not accented the human diligence factors to which Prof. Soddy gives equal value.

Prof. Soddy in recent years has applied scientific method to economics. In the same spirit that he conducted

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PLANTS OF THE DUNES

by

Prof. George D. Fuller
of the Department of Botany of the University of Chicago

FRIDAY, FEB. 24

at 12:45 P. M. Eastern Standard Time
Over Stations of

The Columbia Broadcasting System

his chemical researches that led to the discovery of isotopes, those varieties of a chemical element that differ only in atomic weight, Prof. Soddy has studied economics.

As a result he developed principles which if introduced into practice would, in his opinion, bring about what might be called a beneficial rule by technology or applied science.

Fundamental to the Soddy concept of economics is the idea that the production of wealth obeys the physical laws of conservation and that the exact reasoning of the physical sciences can be applied. The scale on which wealth can be produced, Prof. Soddy said, is practically limited only by the state of technical knowledge.

"There is no longer any valid physical justification for the continuance of poverty," Prof. Soddy wrote. "The phenomenon of unemployment and destitution at one and the same time today is solely due to ignorance of the nature of wealth and the principles of economics, and to the confusions between wealth and debt which have hitherto bemused that subject, even among those who have essayed its scientific investigation and elucidation."

Prof. Soddy pointed out that there are two distinct categories of wealth which owe their value to the opposite qualities of perishability and permanence. Both of these are alike in their manner of production.

But in the formation of the perishable wealth the energy required is stored up for use later by life when the wealth is consumed. This perishable

wealth can only be used once, it actually supports life and it includes food, fuel, explosives, fertilizers and all such materials.

The permanent wealth does not have energy stored within it, but energy has already gone to waste in the process of its making. Prof. Soddy explained that it "enables and facilitates life but does not empower it." Within this category of wealth are all the machines, all our permanent possessions, all the organs of production in industry and elsewhere. The permanent wealth is the "capital" of civilization in the true economic sense, not the monetary sense.

"By saving to an indefinite extent the expenditure of human time in production," Prof. Soddy said of capital in this sense, "capital appears to afford a continuous revenue of wealth without further work, but the origin of the wealth produced is in the continued use of capital by human agents, not in the capital itself. There is no ethical principle to which to appeal, in order to equate the time spent in the accumulation against the continuous expenditure necessary to make it productive, or to determine the just division of the wealth produced as between the capitalist and the worker."

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ARCHAEOLOGY

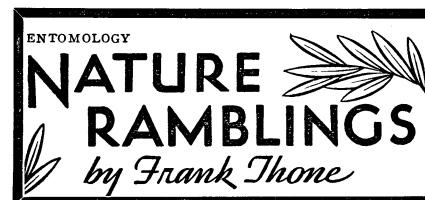
Princeton Expedition Unearths Mosaic Floor

SCENES of brave hunters facing wild animals are revealed on a large mosaic pavement unearthed at Daphne in Syria. A report received in Princeton says that the discovery was made by the committee for the excavation of Antioch and its vicinity, the headquarters of which are at Princeton University.

Exact antiquity of the important mosaic is not yet determined, but the spirit of the drawing has led archaeologists to assign it to the late third or fourth century A.D. The expedition will excavate the building completely this spring.

One large mosaic panel of the pavement, about 23 feet square, depicts hunters on land. A smaller panel depicts hunters at sea. A central medallion contains a bust named "Megalopsychia" in reference to the great mental courage of the hunters in meeting the beasts. The border, now badly damaged, represented scenes from Daphne.

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Surviving Flies

WE ARE ALL familiar with the few furtive flies that flit and crawl about the corners of our houses all winter long, usually disregarded, living along somehow until warmer weather comes again. There are probably more flies that do not thus make themselves evident, but lurk torpidly in corners, moving little or not at all—really hibernating insects.

Such flies are believed by many entomologists to be the starting-points of the swarming myriads that make such intolerable pests of themselves all during the warm seasons. Other scientists disagree, and believe that flies start from eggs or pupae left in manure over winter. In any case, however, each year's crop of flies undoubtedly does start from a relatively small focus of surviving insects.

Flies can spring from nearly nothing to a universally distributed pest in a few weeks because of their amazingly rapid powers of multiplication. The fly lays many eggs, and at the same time has one of the shortest life cycles among insects.

Depending mainly on temperature conditions, but to some extent on other factors also, the fly egg hatches in from eight to thirty hours after it is laid. The larva or maggot feeds and fattens for from five to fourteen days. Then it transforms itself into a pupa, which stages lasts for from three to ten days. The adult insect that emerges from the pupa-case lives for from two to 23 days before egg production begins. Under the most favoring circumstances, therefore, the time from newly deposited egg to egg-producing adult can be as little as one week.

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