

## RESOURCES

# Coal Wants Lost Markets

► COAL WANTS to regain lost markets for millions of tons a year replaced by liquid and gaseous fuels during the past 20 years. The result is the pursuit of much research on coal; coal mining, efficiency in coal use, decreasing nuisances associated with coal-burning, and improvement in securing the full utilization of coal chemicals. This research is conducted by the government, the coal industry, the chemical industry and others interested.

A report on research for the coal industry was presented at the New York meeting of the American Institute of Mining and Metallurgical Engineers by C. E. Leshner, president of the Pittsburgh Coal Carbonization Company. "Coal," he said, "has been fighting a rear-guard action since the last World War." Organized research is the new weapon it is now using.

Coal research in the more efficient use of this fuel has already produced some outstanding results, the speaker said. In 25 years a decrease of 34% in coal is required by the railroads to haul 1,000 gross ton-miles of freight; 50% less is required to produce a kilo-

watt of electrical energy by central power stations, and 20% less is used in making pig iron.

The smoke nuisance can be eliminated if the coal is "burned smokelessly by means of proper mechanical equipment or converted to smokeless fuel." Research has developed "principles for smokeless heating stoves and ranges of new designs."

"Already there are more chemicals, drugs, dyestuffs, plastics, explosives and disinfectants made from what are commonly called coal-tar products than are made from petroleum," he declared. "Coal has been the source of the chemicals from which the greater part of plastics—the phenol formaldehyde resins—have been made." The phenol obtained as a by-product in making coke was sufficient in 1941 for the production of 8,000,000 pounds of nylon, enough to make 256,000,000 pairs of stockings.

The coal chemicals are now obtained as by-products in coking. "If through research it is found worth while to process coal to get the coal tar products, a wider use of coke must be found." There is reason to believe, he said, that the

yield of tar acids from coal by a hydrogenation process may be ten or more times greater than by the present process by carbonization. If this process is developed and employed there would be no coke and the coal would be a direct source of the chemicals required for phenolic plastics.

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## SOCIOLOGY

## Women Can Help Apply Science to Human Problems

By DR. MARGARET MEAD

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*Excerpts from address given before the Science Talent Institute.*

► THE major problem in the application of the physical sciences to nature in the last century was simply to develop them far enough so that they were applicable. But in the social sciences, we have two tasks, (1) to develop the social sciences to the point at which they will be available to the world, (2) to take responsibility for the way in which all science is applied to the solution of human problems. It is in this second phase that women should have a special contribu-

# Advancing Knowledge

of nutrition confirms over and over again what important role the RIGHT KIND of proteins play in the process of living.\* The proteins of meat are of the right kind, of highest biologic efficacy, adequate for every protein need in the organism.

\*"The relative importance of the protein fractions is only now becoming sufficiently known and understood. The proteins guard the body's ability to replace its losses through ordinary wear and tear as well as through disease and operative procedures, and they increase the readiness of wounds to heal. The proteins protect us against infection by increasing the antibody protection of the body. By virtue of their lipotropic power, they help to restrain any tendency to store abnormal amounts of fat in the various organs, notably in the liver. They furnish the factors which control hemorrhage. And an abundant, rich protein supply gives a sense of well-being and vigor and does away with fatigue." (Wilensky, A. O.: The Food Problem in the Present and in the Postwar World. Editorial. Rev. Gastroenterol. 10:314, December 1943).



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

**A M E R I C A N M E A T I N S T I T U T E**  
 MAIN OFFICE, CHICAGO... MEMBERS THROUGHOUT THE UNITED STATES

tion to make, a contribution which draws upon their experience in rearing children. Out of their knowledge that one can only determine direction but not set final goals, out of their knowledge of growth, of the way in which the developing child must be set free to follow his own path, we may be able to derive a useful ethic which can serve as a control to the kind of social planning which would enlist social scientists in blue-printing the world, and so robbing men of their freedom. If the natural sciences, especially as they have been used to develop a mechanized society, are taken as our model, then the whole emphasis falls upon the perfect blue-print, and the means for making materials and men themselves conform. If the biological sciences, and the ways in which these are integrated with problems of human development, especially child develop-

ment, are taken as a model, the emphasis is upon establishing a process which must, if it is whole, be autonomous and free.

No problem is more challenging, no problem will be so rewarding to help solve, as this: How we are to combine increasing knowledge with increasing freedom and increasing dignity for man. If women respect their own sex heritage and if the men with whom they work respect it, they should have something quite special to contribute to the central problem of the 20th Century.

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Salvaged *cartridge cases* will now be used to make new pennies for America; the metal, contaminated with lead and antimony from firing, is not suitable for reuse in ammunition.



### Survival by Sufferance

➤ **GLADIATORS** in the Roman arena, before the games began, made a ceremony of greeting the Emperor as men who were about to die. Only in this late time, however, has tyrant man troubled himself to bestow a passing salute on animals about to die.

It seems a great pity, to us of a conservation-minded generation, that our predecessors did not leave us more nearly complete and adequate descriptions of the wildlife they so thoughtlessly destroyed. We could run some of our own undertakings better if we only had such data, now forever unobtainable. However, such lamentation is after all a bit illogical: if our forebears had considered it worth while to describe at all carefully the wildlife of their day, they would also have considered it worth while to preserve at least fair samples of it.

An effort to set down all obtainable facts about that great section of wildlife that goes on all fours has at last been made, in a recent book called *Extinct and Vanishing Mammals of the Western Hemisphere*, by Glover M. Allen, published by the American Committee for International Wild Life Protection (\$4.50). As the title indicates, some of the species (a regrettably large number, as a matter of fact) are already gone. All that can be done in their case is to comb old records carefully, and examine skulls and other study material in museums; as a rule this material is fragmentary at best.

Other species (also regrettably many) are listed as in no immediate danger, since our suddenly remorseful consciences have finally induced us to stop shooting, and even to set up refuges.



**SOMEDAY** the War will be over.

That'll be quite a day. But what about the day after?

No man knows just what's going to happen then. But we know one thing that must *not* happen:

We must *not* have breadlines and vacant farms and jobless, tired men in Army overcoats tramping city streets.

*That is why we must buy War Bonds—now.*

For every time you buy a Bond, you not only help finance the War.

You help to build up a vast reserve of postwar buying power. Buying power that can mean millions of postwar jobs making billions of dollars' worth of postwar goods and a healthy, prosperous, strong America in which there'll be a richer, happier living for every one of us.

To protect your Country, your family, and your job *after* the War—**buy War Bonds now!**

*Let's all*

**KEEP BACKING THE ATTACK!**