Blood which contained carbon monoxide and blood serum from patients suffering with pernicious anemia, leprosy and pemphigus also checked the growth of the seedlings. But when methylene blue was added to the blood sera, the growth-checking or toxic effect was decreased.

This suggests that the blue dye might be helpful in treating other conditions in which the blood gives a toxic reaction besides carbon monoxide poisoning. While science now has successful methods of treating pernicious anemia and leprosy, treatments for pemphigus are not satisfactory, Dr. Macht pointed out.

However, he warned that the blue dye is a very potent substance and should be used in small amounts, particularly when trying it for the first times in the treatment of disease or poisoning. Treatment of pemphigus patients with methylene blue is warranted as a result of the laboratory findings, Dr. Macht said, but such treatment has not yet been actually tried.

The botanical findings support the laboratory results of Mrs. Matilda M. Brooks of the University of California and the clinical experiences of Dr. J. C. Geiger of San Francisco relative to usefulness of methylene blue in treating victims of carbon monoxide poisoning.

Science News Letter, June 24, 1933

CHEMISTRY

Coal and Carbolic Acid Make New Resin

COAL is the raw material of a new kind of artificial resin manufactured in Germany to compete with more familiar synthetic materials made from phenol and formaldehyde.

The new coal resin, trade named "Kolinit," is the invention of Dr. Franz Fischer, O. Horn and H. Küster. Dr. Fischer is one of Germany's leading chemists and director of the coal research institute at Mülheim-Ruhr.

Wood, peat, lignin and brown coal, as well as ordinary coal, can be worked into the new resin, information transmitted to the American Chemical Society indicates. In process of manufacture pulverized coal is heated with an excess of phenol or carbolic acid. The cost of manufacture is said to be lower than that of competitive materials and it can be used to make buttons, dishes and large objects. The material is electrified by friction as is hard rubber.

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SOCIOLOGY

Marriage More Popular Today Than at Turn of Century

"Go West, Young Man," Where Women Are Scarce, Is Advice To Those Who Would Remain Bachelors

DESPITE the alarm of parents over the doings of "flaming youth," despite the relative ease of divorce, and despite the discouragement of economic conditions, a larger proportion of young people are married today than in the good old days of 1890. The figures are revealed in a newly published book by Dr. Warren S. Thompson, director of the Scripps Foundation for Research in Population Problems, and his associate P. K. Whelpton (McGraw-Hill).

Percentages Drop

Especially are bachelors rushing into the yoke of matrimony. In 1890, about 42 per cent. of the men of all ages were single, but by 1930 this percentage had dropped to 34. Among the men of the more "eligible" ages, the drop between 1890 and 1930 is even more striking—from 81 per cent. of those aged 20 to 24 down to 71 per cent., and from 46 per cent. of those aged 25 to 29 down to a mere 37 per cent.

"Go west, young man," might now be interpreted as advice to the bachelor who wishes to retain his freedom. In the West and in the Northeast, the proportion of married males is lowest. In the West this may be accounted for, the authors believe, by the fact that there girls are more scarce, and this is borne out by the fact that in this region the proportion of married women is higher, not lower, than in any other part of the country. In the Northeast there are many cities with much light industry and office work by which women may become self-supporting. Financial independence makes marriages seem less attractive for girls.

Knowledge of Birth Control

"The trend toward earlier marriage no doubt arises from a complex of social conditions," Dr. Thompson and Mr. Whelpton conclude, "but the authors wish to call attention to the fact that earlier marriage has been taking place concomitantly with the rapid spread of contraceptive information. It seems reasonable to believe that young people, knowing that marriage does not necessarily involve continence, parent-hood, or abortion, are more ready to marry than they would be were they reasonably certain they would have children born at rather regular and frequent intervals if they do not practice continence or abortion.

"The relation between early marriage and the spread of contraceptive information seems all the more likely in view of the fact that a growing proportion of the population live in the cities where the raising of a large family is not to be lightly undertaken."

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ARCHAEOLOGY

Authors of Old World Civilization Sought

A BELIEF that highlanders from the north moved down to Mesopotamia to start off the great pageant of ancient civilization there was expressed by Prof. E. A. Speiser of the University of Pennsylvania in an address before the American Association for the Advancement of Science.

Eagerness of science to identify those mysterious pioneer settlers whose civilization led to the glories of Nineveh, Ur, and Babylon is no mere academic curiosity, Prof. Speiser explained. By tracing Near Eastern civilization to its source, pre-historians are at the same time taking the most direct route to find the source of civilization of today. The modern world acknowledges its debt to Greece and Rome. But in their turn Greece and Rome borrowed heavily from the Near East.

The art of writing, which made historic records possible, began in this region about 3000 years before Christ. It is the unrecorded events of a millenium or two before 3000 B.C. that Dr. Speiser and two other archaeologists are endeavoring to explain. They have found pottery and other objects in no less

than 18 levels of occupation from this long prehistoric era.

In identifying the mysterious early settlers, science is having to depend almost entirely upon archaeological evidence, Prof. Speiser said. Ordinarily language is a valuable aid in tracing careers and identities of racial groups. But Mesopotamia was settled so long before writing began that nothing can be recovered of the languages of the colonists. Nor can the pre-historians derive much help from anthropological material. Comparatively few skeletal remains have been discovered. But archaeological evidence is plentiful, and while it is not the easiest thing in the world to deduce a man's racial identity by examining the contents of his wrecked home, it can be done, scholars believe.

The evidence convinces Prof. Speiser that the founders of civilization in the Near East were a people of the Alpine race who came down from the highlands between the Black Sea and the Caspian. They spread through the Valleys of the Tigris and the Euphrates and west to Syria and east to Persia.

Science News Letter, June 24, 1933

RESTORED BY ELECTRICITY

The human figure on this Greek vase was invisible beneath a forest of crystals until they were electrolytically removed and the paint redeposited on the earthenware.

ELECTROCHEMISTRY

Electric Current Untangles Salt and Paint on Old Vases

SUCCESS in the uncanny feat of using electric current to sort out a tangle of salt crusts and paint on an antique Greek vase was reported by Dr. Colin G. Fink, professor of electrochemistry at Columbia University, at the meeting of the American Association of Museums in Chicago.

Dr. Fink's success in restoring metal art objects by this method previously attracted wide attention. He has now demonstrated that antique pottery long exposed to action of salts in the earth can be returned to its original beauty by electrolysis.

When the vase was brought to his laboratory, Dr. Fink said, it had a crust of crystals of various salts directly over a human figure painted on the surface. The salt crystals had lifted the particles of black pigment entirely out of their original places.

Paint Particles Entangled

"In other words," explained Dr. Fink, "pigment particles were entangled in the little 'white forest' of crystals.

"Had we proceeded as books on restoration advocated, and used water and a brush, most of the detail of design would have been lost."

To see if the electric method could be used, Dr. Fink made preliminary tests with clay and pigments, and determined to make the experiment.

His technique with the vase depended on electrically attracting the pigments back to their original position. He did this by carefully lowering the vase into a vessel of water. Into the vase he lowered a wire, to serve as the cathode; in the water outside he placed a corresponding wire, the anode.

Walls Stop Pigments

As the water seeped into the vase through its porous clay walls, it reached the cathode wire and the circuit was closed. The pigment particles, attracted toward the cathode, of course had to stop when they reached the walls of the vase. They thus returned to the same positions whence they had been lifted by the forming salt crystals many years before.

After the pigments had been re-deposited, the vase and its surrounding vessel were gradually drained. Then, while it was still slightly moist, the vase was lightly sprayed with white shellac. Then it was thoroughly dried and given two more shellac spray coats to anchor the pigments and reinforce the clay itself.

Dr. Fink believes that this method can be used for the restoration of objects made of gypsum and other porous materials as well as for clay.

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MEDICINE

Heat, Cold or Exertion Cause Queer Reactions

A QUEER condition of sensitiveness to heat, cold, or effort was demonstrated to the American Medical Association in Milwaukee by Dr. W. W. Duke of Kansas City, Mo. He calls the condition physical allergy. The patients have many of the symptoms of sufferers from allergy due to pollens and food proteins.

One patient became frightfully depressed and was reduced to tears by warmth and exertion. With cold applications she got immediate relief from her depression and was seized with uncontrollable laughter. Another patient raised his arm three times and had convulsions. Relaxation and relief followed cold applications.

Terrific headache, asthma, partial blindness and skin eruptions were also caused by slight effort and relieved by cold applications. Temporary relief may be obtained by applying the opposite of what caused the attack. Permanent relief in many cases, amounting to cure, was obtained after six months of treatment. This consisted in applying the causative agent, heat or cold or effort as the case might be. Then just when a reaction occurred the opposite agent was quickly applied. These heroic measures, carefully applied, seemed to reaccustom the patient to the distressing factor causing the attack.

Dr. Duke also reported a case of a woman who got eczema of the face in winter. It was found to be due to fungi of firewood used in winter in her home.

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