



MEASURING CURRENTS

Professor Harold A. Abramson with equipment for measuring the electrical charge of blood cells. The blood cells are placed into the glass apparatus on the stage of the microscope and their speed in an electric field is observed.

to rip cosmic-ray photons apart, as it were, and convert the pieces into pairs of electrons.

The reason for favoring this interpretation over that of atomic disintegration lay in the mathematical relation between the number of particles per spray and the weight (atomic number) of the ma-

terial from which the sprays came. The law which Dr. and Mrs. Montgomery found to govern cosmic-ray sprays was the same as that which others have found for the case of conversion into electrons of the gamma rays (also photons) from radioactive substances.

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PSYCHOLOGY

Psychologists Mass To Attack World's Social Problems

SCIENTISTS are massing their forces for a new attack on war, depressions, and unemployment. Research programs, in which several hundred psychologists will cooperate to tackle the great social problems afflicting the world today, are now being planned. Just as the great minds in the field of psychology gathered in Washington at the call of President Wilson to attack the major psychological problems of the World War, so today psychologists are gathering for a similar concerted action against the social conditions that threaten peace and progress, and even civilization itself.

More than 200 psychologists from American universities have already

joined in this great movement. They plan to organize a national society next September.

War Psychological

War, such as the one now seriously threatening Europe and the whole world, involves psychological problems, these scientists believe. Popular notions about man's instincts and emotions may be so incorrect as to have grave significance for the control of war. These are the contentions of Dr. I. Krechevsky, psychologist of the University of Chicago, who is a member of the committee organizing this movement.

"Economists, politicians, physicists, editorialists, munitions manufacturers,

and 'philosophers' have not hesitated to advise society on problems of social motivation, the inevitability of war as 'inherent in human nature,' and the like," Dr. Krechevsky said. "What psychologists have come forth to substantiate or refute these psychological 'laws'?"

"These are important psychological questions in themselves. That their answers may have important social implications does not make them any less so and should not frighten us away from them.

"There is, we believe, a definite need for an organization to encourage, promote, and support, both financially and 'morally,' such research."

Started Last Fall

The germ of this new mass movement on economic and social problems was first observed last fall at the annual meeting of the American Psychological Association at Ann Arbor, Mich. Hundreds of petitions were submitted to the association from universities all over the nation protesting against the "waste of human minds" when scientifically-trained men were put to work at "leaf-raking" or even allowed to sit idle and useless while the nation suffered under the depression.

President Roosevelt and other spokesmen of the New Deal were quoted as pointing to fear and the panic of human minds as the basic cause for the great economic depression of the nation. Yet despite this general recognition of the psychological nature of the problem, psychologists have not taken an active part in the government's attempts to cope with it.

There are no psychologists among the brain-trusters, it was pointed out by Dr. A. T. Poffenberger of Columbia University in his address as president of the American Psychological Association.

Psychologists Under Cover

"The success of the psychological contribution depends upon how well it is kept under cover," Dr. Poffenberger said, referring to the employment in the government service of psychologists as "statisticians" or "economists" instead of openly as psychologists. However valuable the psychological work may be, diplomacy dictates that it shall function under an assumed name." But the employment of psychologists in even this "left-handed" way is the exception rather than the rule.

During the crisis of the Great War, psychologists met in Washington and worked out a plan in record time for making a psychological assay of the hu-

man resources of the nation for the purposes of war. Although it was necessary to do pioneer work in developing tests for the purpose, within a few months these psychologists made possible a sorting of men into the jobs where they were best fitted to serve the nation.

In the present emergency, with millions of Americans unemployed and other millions compelled to accept relief because they are "unemployable," psychologists even after more than six years have not yet made a fair beginning on the problem.

"When the question of waging a successful war was concerned, psychologists were urged to help," said Dr. Krechevsky. "When the question involves an attempt to save a nation from moral, economic, and cultural disaster, which in turn involves a scientific re-examination of fundamental principles and concepts of the social order, the scientist, his disciplined opinions, and his technical skills are dispensed with."

It is to bring the cold, impartial light of science to bear on these vital problems about which theorists have argued in vain, that the new movement has been organized. The following is the official statement of the purpose of the new national society:

Purpose of New Society

"To work effectively for both the immediate and ultimate freedom of psychology to do its utmost to make contemporary American society intelligible to its members, and to suggest and test hypotheses regarding desirable social change.

"To promote and protect objective and scientific psychological research on controversial topics, especially in the central fields of economics and politics—national and international.

"The administration of timely referenda (such as a referendum now planned to feel out present attitudes of the public toward war).

"The encouragement of the discussion of the application of the findings of psychology to the problems of social order."

This great movement for the application of science to the solution of vital social problems has precedence in a movement also inaugurated in the fall of last year among 339 psychiatrists of 30 nations. With the backing of the queen of The Netherlands, these physicians to the human mind began an attempt to combat what they termed the insanity of war. This movement has aroused considerable interest among psychiatrists and psychologists in the United States, some of whom have taken an active part in it.

Committee Personnel

The members of the committee arranging formation of the new organization are as follows:

Drs. Gordon Allport, Harvard; J. F. Brown, University of Kansas; Leonard W. Doob, Yale; Franklin Fearing, Northwestern; Ward Halstead, University of Chicago; George W. Hartmann, Pennsylvania State College; I. Krechevsky, University of Chicago; Walter A. Lurie, New Orleans; Norman R. F. Maier, University of Michigan; Lorenz O. Meyer, Chicago; Karl F. Muenzinger, University of Colorado; Marion W. Richardson, University of Chicago; Floyd L. Ruch, University of Illinois; Theodore C. Schneirla, New York University; Ross Stagner, University of Akron; Harry C. Steinmetz, San Diego State College; Edward C. Tolman, University of California, and Goodwin Watson, Teachers' College, Columbia University.

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It is reported that three-fourths of the totem poles sold to tourists in Alaska are made in the Orient, because Alaskan Indians have not yet gone into the craft trade on a large enough scale.



Survival of the Longest

DROUGHT again underlines one type of natural selection that regularly comes into play on the Prairies and Plains in years of scanty moisture. Survival of the fittest, at such times, is to a considerable extent survival of the longest-rooted.

Plants of the open grasslands in general have roots much longer than their tops are high. Foot-high native grasses often have roots three or four feet long; two-foot-high wild roses and other shrubs drive their roots as much as eighteen feet into the subsoil, where moisture persists even after it has been dried out of the top layers.

This has a particular bearing in the question of crop plants. Crops that we plant in plowlands are usually shorter-rooted than their wild prairie competitors that we carefully exclude as weeds. Thus spring wheat is blighted, while bluestem and grama-grass survive. An exception is corn, which often produces five- or six-foot roots, so that we have seen corn "getting by" until now, while small grains suffered.

Of course long roots are not the only thing that makes for drought resistance; neither can they save the plant if the subsoil moisture joins the topsoil moisture in evaporation-flight to the brazen and pitiless sky. Even when water is still available, corn leaves may be burned and curled by hot winds that cook the sap out of them faster than new supplies can be drawn up from the roots. For this reason, plant breeders strive for tough-fibered, stout-skinned leaves and stems while they also keep an eye on depth of roots.

The present drought will put another arrow in the quiver of ecologists who have been arguing for the restoration of the old native sod cover on western pasture lands, to replace the juicier but

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