sumacs at all, except to botanists who have the hardihood to examine their flowers and fruits carefully—but it is by these, and not by leaves, that botanical kinships are established.

Even less like the conventional notion of what a sumac should be are the singleleaved bush sumacs found abundantly on the Pacific slope, and represented also by other species in some parts of the interior. Some of these are so sour in leaves and fruit that they have earned the name "lemonade bush"—possibly from the use of their fruits by pioneers in making an acidulated beverage when lemons were an unobtainable luxury.

Science News Letter, December 2, 1989

PSYCHOLOGY

## Propaganda Need Not Lie; May Succeed With Part Truths

This timely article is another of the series being released by the Society for the Psychological Study of Social Issues through Science Service. The SPSSI is a group of psychologists specializing in the field of social problems.

PROPAGANDA does not have to lie. Its success may depend not upon violation of the truth but upon failure to refer to facts pertinent to an opponent's case.

If an English, German, or domestic propagandist merely suppresses some of the facts in a situation, he will tend to make people agree with his point of view without distorting the facts he does present.

During the time of the first Japanese incursions into Manchukuo, an investigation which was planned by W. K. C. Chen at Columbia University was carried out at seven American universities.

Classroom instructors, while making no attempt to veil the character of the propaganda they were employing, slowly and emphatically recounted facts relative to the situation in Asia.

Some student groups were presented with authentic facts which had been organized by a Japanese publicist. In other classes facts had been organized by a Chinese publicist.

Each publicist had emphasized the sacrifices and investments his own country had made in Manchukuo. All of the facts were "true," but neither publicist mentioned the facts of his opponent.

Even though these student groups were well aware of the importance and effects of propaganda, it was shown that the mass of evidence from one side which had been presented to them affected their attitudes toward the role of Japan and China in Manchukuo.

Students hearing only the Japanese side moved very strongely and clearly in the pro-Japanese direction. Those hearing the Chinese summary of the

facts became more pro-Chinese. After the experiment the student groups were shown on the blackboard how tremendously they had been influenced by this type of propaganda and general implications were discussed.

In this investigation it was also revealed that groups which were not subjected either to Japanese or Chinese propaganda did not change their attitudes, a finding which suggests that the groups whose attitudes shifted must have been affected by the presentation of the one-sided facts. Even a summary of the Manchukuo situation by an impartial source caused another group of students to revise their judgments.

This is one of a series of investigations which indicate clearly that awareness of the danger of propaganda does not prevent individuals from being affected when the simple device of leaving out half of the picture is utilized.

Science News Letter, December 2, 1939

PALEONTOLOGY

## Fossil Found in Colorado 50 Million Years Old

COSSIL remains of a hitherto unknown mammal that lived in Colorado 50 million years ago, and that looked like nothing now living on earth, have been brought back to the Field Museum of National History by an expedition under the leadership of Bryan Patterson.

The animal, found in a stratum of paleocene date, stood about three feet high, was six feet long, had thick legs and a generally heavy build. Its teeth indicate that it was a plant-eater. The group to which it belonged, long extinct, is known to paleontologists as the pantodonts.

Science News Letter, December 2, 1939

China is one of the largest wheat-growing nations.

"BOOKS THAT LIVE"

## Science for the World of Tomorrow

By GERALD WENDT

Director of Science, N. Y. World's Fair

Outmoded pedagogy considered science as a great body of knowledge, a vast encyclopedia of facts and principles, a gigantic collection of useful instruments and machines. Taking the modern viewpoint that science essentially is a method of solving problems—problems that in the main concern man and his welfare—the author evaluates scientific progress in terms of human values. By analyzing the forces which have produced the world today, he projects upon a broad canvas a fascinating vision of the world of tomorrow. 70 illustrations. \$2.75

A Scientific Book Club Selection

## Matter and Light

THE NEW PHYSICS

By LOUIS DE BROGLIE

Member de l'Institut, Nobel Prize Award 1927, Professor of the Faculty of Science, Paris

The results of modern physical research are probably the most vital product of the twentieth century. Recent investigations demonstrating the affinity between light and matter appear to some observers to go to the very root of an understanding of the physical universe. One of the most distinguished workers in this field here presents studies on this and related aspects of contemporary physics. Subjects included are a general survey of present-day physics, matter and electricity, light and radiation, wavemechanics, etc. \$3.50

W. W. NORTON & CO.

70 Fifth Avenue, N. Y.