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Out of the House of Magic

WALTER J. MURPHY, Editor

IN BOTH FEATURE ARTICLES of this issue (page 388 and 395), the subjects relate to the world's feeding itself. Extension of food sources and the improvement of agricultural productivity both depend on science. Regardless of one's attitude toward the increasing influence of science on our life, it is here and it is important. That influence is likely to become more important in the future. It must. We see only the grimmest of prospects for a 1980 world of more than 3.5 billion people (there were about 2.5 billion in 1950), should we advance no further with the uncovering and application of new knowledge.

With science so significant in our material and frequently cultural life, its place in public opinion and understanding demands attention. We add nothing original, only a thought frequently neglected, by pointing out that people fear and distrust that which they don't understand. An atmosphere of fear and distrust is nourishing to quacks and demagogues. In "Perspective" (page 452), the author comments that science still lives in the "House of Magic." L. A. DuBridge, Caltech's president, recently told the trustees of the Nutrition Foundation that "the physical achievements of science are evident. But, because they are physical, scientists are accused of being materialists. Because the tools of science are powerful, their power is feared and those who created the power are suspected of evil motives."

Public understanding of science is a broad problem of great complexity. The greatest manifestation of need for understanding is found in the matter of public opinion on the hydrogen bomb. Any suggestion that the real problem is the failure of our society's social development to keep pace with its technical falls with little concrete impression.

The approach to a problem of such breadth is discouraging on first examination. But to bring it down to smaller areas, one can conceive of steps to be taken. Some very effective work has been done in certain areas. Consider the reputation of the chemical industry following World War I: munitions manufacturers and merchants of death. Today, in the same arena, the public is aware of remarkable synthetic fibers, miracle drugs, synthetic vitamins, and host of other accomplishments that are constructive—a successful step in a limited area. But each time development surges in a particular field, new opportunities are opened for misunderstanding.

To focus on an even more limited area, try the chemical pesticides field. There is satisfactory evidence that the control of insects and other pests by chemical means has been beneficial to agricultural production. Yet progress in this field is in danger of being hampered by public opinion based on a very small number of unfavorable incidents (page 373). Most of the cases can be traced to carelessness on the part of the user. But they make good material for sensational stories. A public is easily made suspicious of these poisonous chemicals which to the average layman are mysterious distillates from a house of magic. Daily deaths of careless users of automobiles bring no clamor that we return to the horse and buggy. Almost every reader of a newspaper feels acquainted on a first name basis with the automobile. We suspect that relatively few drivers could explain the workings of that complex product of science and technology much better than they could describe the bug-killing action of DDT. But they feel no longer that it is a mysterious creation, the details of which are hidden from them in the esoteric circles of the evil-smelling scientists.

This does not mean to condone damage to health from insecticides. It merely means to say that the public must be made to feel acquainted more intimately with these products, while also being made to have a respect for their dangers in misuse. The poisonous properties of parathion are not dark mystery, they are matter of fact. The man who shows his bravado by daring to walk into the den of mystery and ignore the warnings is as likely to die as one who is fed the stuff in his morning coffee by a scheming enemy. An intensive program of education is needed.

The approach to general public understanding of science is much more nebulous and contains knotty philosophical problems, but step-by-step progress at the ground level can make its contributions.

Chemical Progress Week

ONE OF THE CONCRETE ATTEMPTS to improve public understanding of the chemical industry is Chemical Progress Week, May 16–21. Nationally sponsored by the Manufacturing Chemists' Association, it has the cooperation of the AMERICAN CHEMICAL SOCIETY and other scientific and technical organizations. It provides an opportunity for the chemical industry to tell its story to the people in their own cities and towns. Through speeches, displays, and publications the explanation is directed at the local level, not only to tell the people how much the chemical industry does for the community, but what the production in that community does in the way of contribution to general welfare. Furthermore, it offers guidance and consultation to the youth in a community who may be interested in considering a career in chemistry. It deserves the cooperation of every individual connected with the chemical industry.