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Politics Nullifies Science In Environmental Studies

MANY OF OUR environmental dilemmas and cultural diseases are the product of some fairly good science and rather bad politics. The scientists (myself included) have then made some rather sanctimonious remarks about the neutrality of knowledge; that we would have no troubles if only human nature could develop a moral integrity to match our scientific insight.

The radical critics demand either a moratorium on science or a totalitarian reconstruction of it toward "relevant" goals. The taxpayers are left too confused to distinguish the baby from the bathwater, and (except for supersonics and super-weapons) both may go down the drain.

The problem is often too little science; almost always, one of poor balance. For example, the automobile and the superhighways are firmly based on science—19th century science. Until very recently, land transportation was connected with only the most trivial research. But every indictment of "our technocratic society" focuses on the evils of the internal combustion engine as an example of what happens when "scientists are allowed to control our lives."

IN FACT, some elegant scientific work did lead to public anger about the pollution of our environment. This was the pioneering work, about 20 years ago, of Prof. A. J. Haagen-Smit, at the California Institute of

Technology, on the origin of smog in Los Angeles.

Contrary to everyone's common-sense knowledge, this proved to be auto exhausts, not industrial smokestacks. To learn this required an esoteric study of chemical reactions of unburned hydrocarbons in the atmosphere under the influence of sunlight.

So far, Dr. Haagen-Smit's work has eventuated in a modest amount of social good by leading to smog control devices and regulations. Some might decry even that, just for prolonging the tolerability of auto-based cities, but I know of no other pernicious side effects of his research.

Possible military applications would, of course, have been sought on the obvious theory that smog would make a potential war gas. As is on the public record, Ft. Detrick took an interest in this at least a decade before significant funds were available under the aegis of the public health. Even now, research on smog is sure to be set back by the shutdown of work on chemical warfare, given the political realities on transferring military research funds to the budgets of the civilian agencies.

IN A SOMEWHAT different sphere, scientific work on chlorine and the discovery that it can disinfect drinking water is a major cause of the pollution of our waterways. I do not refer to the role that chlorine itself may play as a "pollutant," although, astonishing to say, this has been the subject of very little research. Rather, the confidence that chlorination would make any water supply "safe," no matter how badly polluted to start, is the keystone of our sewage disposal system—namely, "dump in the nearest river!"

By the standards of 1911, when chlorination was introduced, this was almost justifiable. Our sense of smell, and our demand for environmental amenities, have become more refined in 60 years. And they are reinforced by the pork barrel potentialities of sewage treatment grants as a logical extension of rivers and harbors largesse.

Despite the \$1 billion level of public interest now established for sewage management, the health safety aspects of water supply have been passed by. For example, a close colleague of mine was recently rebuffed on a research grant application to study the chemical reactions of chlorinated water with DNA, on which he had already gotten some provocative leads. Months later, we discovered that the Health, Education and Welfare Department branch which entertained his application had a budget of precisely zero dollars for new research in water safety.

THE REORGANIZATION of bureaus in the recently proposed Environmental Protection Administration may help to unify authority and expertise in dealing with interconnected problems of water safety, radiation hazards and pesticides. If so, and if it has a realistic mandate and budget for scientific work, it will be none too soon to make up for the fiscal emasculation and political dismemberment of health research now under way in HEW.

This is a process that can be proudly advertised as leading to a new Utopia, the one whose slogan is "Ignorance is bliss." The consolation is that scientists may be relieved of any moral burden for the abuse of undiscoveries. In the tension of science and policy, human nature is only partly at fault—that part called "apathy" of citizens and statesmen toward unprincipled political games.

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