Science and Policy

FOR some time, members of the American Association for the Advancement of Science have been bombarded, in the press and by mail, with arguments for or against the Upper Colorado project, and in particular the Echo Park Dam. This is a proposal to impound waters of the Colorado River for power and irrigation of arid lands. Proponents insist that it is essential to the growing economy of Utah and portions of Wyoming, New Mexico, and Colorado. The opposition contends that one of the dams will flood portions of a national monument, Dinosaur, thus violating a principle and establishing an unwholesome precedent. The project, they say, will be costly out of proportion to benefit. It will divert water now used and needed for activities in California where the water problem is already acute. Such diversion, it is argued, violates the legal principle of prior appropriation that prevails under Spanish law in our West. Even if the project were justified on its merits and in principle, opponents insist that alternative sites are available which would not invade reserved areas.

Supporting arguments add to the confusion. The respected senator from Utah, Arthur V. Watkins, denies that any infringement of national park lands is involved [*New York Times,* 29 March 1955]. The no less respected U. S. Grant, III, maintains the opposite view and, as an engineer, has investigated the situation, giving his judgment that the Dinosaur site is actually less desirable than others that are available. To this the Department of Interior counters with an unfavorable report on evaporation rates from other sites—and opponents question the figures presented.

Advocates urge that the project will enhance, rather than diminish, recreational values. Opponents cite the siltation and pollution that have impaired these values in Lake Mead. Again one side emphasizes the power and agricultural needs of the area to be benefited. The other maintains that only a limited proportion of the expense will be charged to power, and that the benefits to agriculture cannot be repaid out of income but must be underwritten by the nation, now plagued with crop surpluses. Tax figures, said to be reliable, show that the states to be benefited will pay less than 2 percent of the cost.

Costly and important as this whole issue may be, its greatest significance lies in illustrating a serious defect in our national structure as far as the relation of science to public issues is concerned. Scientific knowledge and personnel are available to present the American public with factual, verifiable information, thus stripping the issue down to essential questions of national policy. Public issues should not be clouded and confused by failure to get at the basic scientific facts. The role of science in a technologic civilization such as ours should be perfectly clear: to cut to a minimum the areas of uncertainty and dispute. The present claims and counterclaims concerning the effects of radioactive fallout from bomb-testing is another pertinent example [see Bertrand Russell, *Saturday Review,* 2 April 1955, with reassuring statements from other sources]. So are the divergent statements concerning our reserves of nonrenewable resources. Similar intolerable and costly conflicts are likely to be more, rather than less, frequent as life becomes more complex through population increase and the growing demands of technology.

The remedy is simple. It must become part of our habit of thought and a recognized procedure to insist that, in matters of public policy where verifiable physical knowledge is involved, such aspects of major problems be referred to impersonal, disinterested, and competent boards of scientists. We have, in the National Academy of Sciences and the National Research Council, a proper and legal mechanism for such assignments. These two closely interrelated groups have at their command the entire scientific talent of the nation. For various reasons, however, they cannot inject themselves into controversial issues, unless the Government or the public demands that they do so.

One group of scientists has not shared this inhibition. The Engineers Joint Council has investigated and reported (unfavorably) upon the Upper Colorado project. But the air would be greatly cleared and an important principle established if the services of bodies representing all phases of science were called upon to analyze this and similar issues.

Failure to use science as a source of perspective in our present stage of culture degrades its function and may in time be disastrous.

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