Briefing

Ford Signs Science Policy Bill

President Ford has signed into law the bill reinstating science advisory machinery in the White House which finally passed Congress in early April. Ford, a backer of such a bill for more than a year, made a few remarks invoking the spirit of Thomas Jefferson and emphasizing the importance of science, engineering, and technology. He then signed the bill, made a handshaking round of the dignitaries from government and the science community who were assembled in the East Garden of the White House, and went off briskly to the next event on the day's schedule. He did not take the occasion of the alfresco signing ceremony to name a new science adviser. A start has reportedly been made, however, in organizing the Office of Science and Technology Policy, with the Domestic Council, the National Science Foundation, and the Office of Management and Budget sharing responsibility for getting things going.—J.W.

Congress Buys *Small Is Beautiful*

An English economist's ideas about the role of technology in society are enjoying sudden favor in Congress. His concepts have already been incorporated into the appropriations bills of no less than four federal agencies.

The economist is E. F. Schumacher and the chief vehicle for his ideas is a collection of essays entitled *Small Is Beautiful.** First published in 1973, the book has acquired a wide following and something of a cult status.

The central theme of Schumacher's ideas is that technology need not be a law unto itself but should be carefully designed to fit the specific circumstances of its users. For example, developing countries, Schumacher's particular field of interest, would often do better with labor-intensive technologies similar to those used by Western countries half a century ago rather than with the labor-displacing techniques of today.

Schumacher coined the term "intermediate technology" and set up a company, the Intermediate Technology Development Group, to spread the idea to the Third World (*Science*, 18 July 1975).

Intermediate technology is often used interchangeably with the essentially similar concepts of "appropriate technology" and "alternative technology." All refer to technology which possesses the social and economic attributes the speaker considers desirable, such as being low cost, labor intensive, small scale, easy to operate and repair, and sparing of energy. For many, the ideal of appropriate technology is the bicycle.

Congress has recently taken up the idea of appropriate technology in a significant way by writing encouragement or specific dollar amounts into the budgets of various agencies.

- The Agency for International Development received $20 million in its 1975 budget to establish an intermediate technology program in conjunction with the private sector. The idea came from members of the House Committee on International Relations who were impressed with Schumacher's company and its work for developing countries. AID has not yet decided on the framework within which to spend the money.
- The Community Services Administration, the successor to the Office of Economic Opportunity, has been granted $3 million to establish a National Center for Appropriate Technology. The center, still in the design stage, will probably be located in Butte, Montana. The center will help develop appropriate technologies for the poor, such as home insulation, and award grants to support local community technology groups.
- At the suggestion of Congressman George E. Brown (D–Calif.), the House Committee on Science and Technology has directed the National Science Foundation to give emphasis to intermediate technologies. "Intermediate" or "appropriate" technologies, the committee said in its report authorizing the agency's 1977 budget, "may be defined as the level of applied technology which is best suited to specific cultural, economic, social and political climates." Inquiries among senior NSF officials did not uncover any high level of awareness of intermediate technology or immediate intent to emphasize it.
- Also at Brown's suggestion, the House has written similar encouragement into the budget of the Energy Research and Development Administration.

Among presidential candidates, Governor Jerry Brown of California is a longstanding fan of Schumacher's and has set up an Office of Appropriate Technology in the California state government.—N.W.

*Harper & Row. $2.45. 306 pp.

The Rise and Fall of a Research Project

Passions have run high over the so-called sex-pot case, the proposal by an Illinois researcher to ascertain the effect of marihuana on the human sexual response.

The House of Representatives deleted funds for the project, being persuaded by Congressman Robert Michel, the Republican whip, that it was the sort of thing which wouldn't play in Peoria (*Science*, 30 April). Michel, it so happens, represents Peoria.

The research community is up in arms because of political interference with the integrity of the peer review process.

Last month the issue came up for debate on the floor of the world's greatest legislative assembly. On the one side were arrayed the forces of rationality and progress. On the other were those who stood for morality and traditional values.

Historic occasions can be hard to rise to. Some senators were too bashful to go to the core of the matter at hand. "If I were to recite in this Chamber what this experiment is doing I would have to clear the galleries of all the ladies, at least, and maybe some other people," warned Senator Warren Magnuson of Washington.

Dr. Harris B. Rubin and his colleagues at the Southern Illinois University Medical School proposed to exhibit pornographic films to people who had smoked marihuana and to measure the response with sensors attached to the penis.

Marihuana, sex, pornographic films—all in one package, priced at $120,000. The senators smothered the hot potato with a ketchup of colorful oratory and mixed metaphors.

"I am firmly convinced we can do without this combination of red ink, 'blue' movies, and Acapulco 'gold,' " Senator John McClellan of Arkansas opined in a persiflage of purple prose.

Senator Milton Young of North Dakota declared that the provision for the project stuck out "like a sore thumb." For Senator Magnuson, it was something "to call a halt to and put our foot down on."

The cause of science was pleaded by Senator William Hathaway of Maine. The

project had been exhaustively reviewed and commended by all the appropriate bodies, he said. He deemed it an irony that Congress, "possibly the least expert group of Federal employees to gather together in one building," seemed now "to have taken upon itself the role of grand inquisitor with regard to scientific research." He asked his colleagues, whatever they might think of this particular project, to refrain from damaging the integrity of the peer review process.

Senator Charles Percy of Illinois rose to defend his constituents, though with more down-to-earth reasoning. The project should be funded, he said in effect, because if it proved that pot was bad for sex, the weed would take a dive on the market. But, his listeners must have asked themselves, if vice versa, would vice be worse?

Senator McClellan said he did not know which way the experiment might go. But it occurred to him "that the man who uses marihuana can best determine for himself what effect it is having on his sex life."

Senator Magnuson seemed to be under an impression that Dr. Rubin was asking more of congressmen than just dollars. "But to ask us to participate in this sort of project," he warned, "makes us look a little bit ridiculous in using taxpayers' money."

Hathaway, recognizing a thumbs-down sign when he saw one, begged Magnuson to agree that "the Senator does not consider this a precedent for further incursions into the scientific peer review process; and that this is not going to be an everyday affair where one Senator or another picks on this project, that project, or another project, and has it deleted through amendments to an appropriations bill."

"That is absolutely correct," Magnuson graciously replied.

Whereupon the Senate, by voice vote, followed the House in denying federal funds to Rubin's study, probably the most frequently and intensively approved of any project to pass through the peer review system.

The result is a defeat for science, but perhaps not a total wipeout. Rubin is following one of Senator McClellan's suggestions—that he seek private funding. And while Congress may brag about having struck a blow for decency, the research community got something like a promise that Congress won't do it often again.—N.W.

From its inception, Schmidt's investigation of the FDA had one fatal flaw. It was an internal study. Agency personnel had charged, among other things, that

- their recommendations to approve new drugs had never been questioned, but their recommendations to disapprove were almost always challenged by agency higher-ups;
- their efforts to disapprove drugs resulted in repeated harassment from FDA officials; that files were altered to delete negative data; and
- they were all removed from the review process and/or transferred to another division after recommending disapproval of specific drugs.

Such charges are, at best, difficult to prove, especially since there are a number of reasons for reassigning individuals within large bureaucracies. But the last people who can be expected to come up with a credible assessment of the situation are agency people themselves.

Internal Study "Ill-Advised"

Last month, when the Chalmers panel completed its review of Schmidt's report, it took him to task on a number of points. It found that he was "ill-advised" in deciding to conduct his own investigation; that his report left unresolved important accusations against the FDA; that his broad defense of agency policy and behavior was unsupported by the evidence; and that fundamental questions about the relationship between the industry and the FDA were virtually ignored.

The commissioner's internal investigation of the FDA cost $196,000. The Chalmers panel's assessment of the commissioner's report cost, depending on whom one talks to, another $140,000 to $200,000. The investigation for which panel members, minus Chalmers, are now calling is estimated to cost yet $100,000 more, and even some of those who would like to see this third investigation take place admit that it may never be possible to resolve questions about "who struck John" back in 1968 and 1969 when some of the incidents in question took place.

The situation is not encouraging. As one panel member put it, "you have an inconclusive 900-page report followed by an inconclusive 545-page report. No wonder people wonder about the whole bunch of us." For all that money and verbiage, the cloud that hangs over the FDA, damaging its reputation, hangs as darkly as before and the force of the review panel's findings are diminished by the inability of the majority and dissenting chairman Chalmers to come together on what each side sees as some very fundamental issues.

First, it should be said where the panel majority and Chalmers agree. He, as he states clearly in his dissenting report, joins the majority in saying that the allegations made by the 11 scientists point up "important administrative deficiencies not sufficiently appreciated by the Commissioner . . . ;" that Schmidt should never have conducted an internal investigation; and that, having made that poor choice, he should have at least looked more deeply into many of the specific allegations of harassment and improper reassignments before concluding that they were without substance.

From here, Chalmers and his panel part company. What it amounts to is that Chalmers thinks the panel devoted too much time and effort to a critique of the commissioner's report, with a needlessly heavy emphasis on its inadequate methodology. Chalmers does not think that the panel's methodology was a whole lot better. He accuses the panel of approaching the commissioner's report in a "prosecutorial manner," putting the burden of proof on FDA management rather on those making allegations of wrongdoing.

The panel, quite simply, disagrees, both with Chalmers' position and with his assessment of theirs. Suffice it to say that the panel members believe it is important to try to resolve allegations of past impropriety and that the way to do so is to conduct an outside investigation. Perhaps they should hire Harry O.

What it all amounts to so far is that FDA has been investigated yet once again and it is not clear that anything has come of it. Panelist Norman Weiner, in a comment on the panel's report and the chairman's dissent, says quite aptly, "It is commonly stated that a 'camel has the appearance of an animal put together by a committee.' This report has attributes of a camel."

What happens next is up to HEW Secretary David Mathews, who has to decide whether to empower the panel to conduct another investigation. It is hoped that he will have made up his mind by 7 June when the panel meets again. For all the arguing that has taken place about the commissioner's report, very little attention has yet been paid to questions about the basic ways in which FDA conducts its business and there is still a chance the panel will pull itself together and address them constructively. As one panelist commented, "I hope that at our next meeting we can rise like Phoenix," but he is not at all sure about it.

—BARBARA J. CULLITON