

cation of these guidelines may be conducted if supported by the Secretary, HEW, provided such research has been approved by a national ethical review body," is what the second half of this particular recommendation says. What it means is that an investigator, who has a good case for selectively experimenting on fetuses about to be aborted, can circumvent the more stringent requirements if a national review body can be convinced that the circumstances warrant it (adopted by a vote of 8 to 1).

(To some extent, the commission is passing the buck by laying decisions at the

feet of a national review body, particularly in as much as no such body now exists. However, one of the commission's recommendations to the Secretary is that he create a national ethical review body to handle situations that cannot be dealt with adequately by local ethical review groups which must be established in every research institution. Although commission members are reluctant to call it an appellate court, it would certainly serve that function. A provision that its activities be public has satisfied some commissioners that it would be a basically conservative body. There is no telling how much red

tape it would add to the already complicated process of conducting research.)

Unlike so many federal advisory bodies that write reports that are not read and offer advice that is not taken, this commission's activities are expected to have a very real impact on federal regulations. The Secretary of HEW, for example, must implement them or else explain in writing, in public, why not.

Chances are that the fetal research guidelines proposed by the commission will not please everybody, but there is no reason to think any other group could do any better.—BARBARA J. CULLITON

Strip Mining Legislation: The Tug of War Continues

For several years now, on the question of strip mining regulation as well as on other issues, coal industry lobbyists and environmental lobbyists have been tugging hard at opposite ends of the legislative rope. And, although Congress sent a strip mining bill to the President on 7 May, the tug of war between the lobbyists is not yet over. The Surface Mining Control and Reclamation Act of 1975 has been pronounced as unacceptable by the industry lobbyists, and they are demanding a presidential veto. The environmental lobbyists, while they view this bill as in part a congressional cop-out in favor of the mining interests, nevertheless much prefer it to no bill at all.

These conflicting reactions were predictable in light of the dilemma Congress has faced in wanting to encourage the rapid expansion of coal production while at the same time protecting the environment of the eastern and western coal regions. If President Ford vetoes the bill it will be because he has been persuaded by advisers in the Federal Energy Administration (FEA) and the Department of the Interior that the economic costs imposed by the measure would be too great. Frank Zarb, administrator of the FEA, told Congress in April that the proposed strip mining legislation could result in "locking up" between 12 to 72 billion tons of coal, or up to 53 percent of all domestic coal recoverable by surface mining.

Zarb emphasized that to impede coal production in the face of the need to reduce

dependence on foreign oil would be folly. He said also that, by forcing up the price of electricity from coal-fired generating stations, the legislation could have an inflationary impact; and, finally, that up to 36,000 jobs might be lost as numerous small strip mining operations in Appalachia and elsewhere were forced out of business by mining restrictions and reclamation requirements.

The validity of these objections to the bill is in much dispute, and Representative Morris Udall (D-Ariz.), the bill's chief sponsor in the House, has accused administration officials of playing a "shabby numbers game."

As finally passed, the strip mining bill reflects some concessions to Administration criticisms, but probably not enough to gain either the support or the benign neutrality of officials such as Zarb. Last December Zarb opposed a bill similar to the present one, and President Ford vetoed it.

The National Coal Association (NCA), the industry lobbying group, has repeatedly voiced the same objections that Zarb has. Indeed, to judge from its record, the NCA would prefer no bill at all.

The environmental lobbying for a strong strip mining bill has been led by Louise C. Dunlap and John McCormick of the Environmental Policy Center, a Washington-based group. Dunlap acknowledges that if the strip mining bill becomes law, it would do a lot of good overall. But she and her associates are still indignant at actions by the House-Senate conference

which removed from the bill some things they put great store by—which is itself evidence that the bill is not designed to impede strip mining.

As Dunlap and other environmentalists recognize, the bill would bring a much needed uniformity of standards to strip mining regulation. Heretofore, apart from some conditions attached to federal coal leases, such regulation has been left to the states. But while a few states have imposed stringent reclamation requirements, most have not. Under the measure now on the President's desk, regulation would remain in state hands but would be subject to federal oversight and certain minimum standards. For instance, land that has been stripped of its coal would be returned to its "approximate original contour," a term of art to be applied flexibly enough to allow open pit mining in relatively level areas as well as "contour" mining on steep mountain slopes.

The fact that contour stripping would be allowed to continue under the bill represents a major concession to the coal industry, although this particular issue was settled at the outset of congressional deliberation about strip mining several years ago. This controversial mining practice is in bad odor even among some of the major coal companies.

For instance, the Pittsburg and Midway Coal Mining Company (a subsidiary of the Gulf Oil Corporation), in a recent brochure said, "This mining method has been widely used by irresponsible coal operators who have left environmental disasters over large areas of Appalachia." It added that, inasmuch as only a small percentage of domestic coal is produced by contour mining, the practice probably should be stopped altogether, at least pending development of acceptable reclamation practices. This is a remarkable position for a company whose president, James A. Borders, sits on the board of the NCA, a group which holds

contour stripping to be as innocuous as ploughing the south forty.

A particularly harmful aspect of contour stripping is the practice of dumping the spoil or overburden down the slope from

the bench or "cut" that is made to gain access to the coal. In this regard, Dunlap was disturbed at an exception made to the pending bill's ban of this spoil disposal practice. Under the bill, spoil from the first

short linear cut—and it is not clear how many "first cuts" will be allowed—can be left permanently on the downslope, where severe erosion and even landslides will be an ever-present possibility. The House-

Briefing

NSF Controversies Remain Unresolved

The Senate passed an \$826.6-million authorization bill for the National Science Foundation (NSF) by unanimous vote on 13 May without any attempt to include a companion version of the controversial Bauman amendment adopted last month by the House. That amendment, sponsored by Representative Robert E. Bauman (R-Md.), would give Congress authority to review, and if it saw fit, to kill, any of the 14,000 grants awarded each year by the NSF.

The Senate took up the matter in the midst of a lengthy debate on bills to establish a new consumer protection agency. The speed of passage, floor managed by Senator Edward M. Kennedy (D-Mass.), took many by surprise, including Bauman, who at last word was still looking for Senate sponsors for his amendment. The two bills will now go to House-Senate conference which will decide between keeping or not keeping the amendment.

Meanwhile, Representative Olin E. Teague (D-Tex.), has appointed a conspicuously Texas- and aeronautics-oriented group to advise his Committee on Science and Technology on the future of NSF's curriculum development programs. One such program, "Man: A Course of Study" (MACOS), aroused the movement for stricter Congressional oversight of NSF's educational activities and led to the Bauman amendment's passage on 9 April (*Science*, 25 April). Teague is under pressure from Congressional conservatives to reexamine a number of NSF policies.

His review group will be headed by James M. Moudy, Chancellor of Texas Christian University. Two members, whose principal qualifications are that they are mothers of school-age children, will be Mrs. James A. McAuley of Dallas and Mrs. Russell L. Schweickart of Arlington, Virginia, wife of the former astronaut. Rocco A. Petrone, who recently resigned as associate administrator of the space agency and now

runs a private firm in Washington, D.C., will also be a panel member.

Other members will be the former Democratic Congresswoman from Oregon, Edith Green, who, as chairman of an education subcommittee, had moved farther and farther away from the liberal majority; Gerard Piel, publisher of the *Scientific American*; Elam K. Hertzler, a special assistant to the Commissioner of Education in the Office of Education; and Jim W. Zumberge, Chancellor of the University of Nebraska, who is also a member of the National Science Board which oversees the NSF.

In addition to these reviews, the Justice Department has begun a separate investigation of "possible tax and financial irregularities" in connection with MACOS' distribution nationally.—D.S.

Soviets Said to Gain More from Science Exchanges

The Soviet Union is benefiting more than the United States from the current program of science exchanges, according to a Jewish physicist who recently emigrated to Israel and is now visiting the United States. Aleksandr Voronel, who went into hiding last year in the Soviet Union to avoid arrest after an abortive attempt to organize an international scientific seminar in his apartment, says that the Soviets have much more to gain from the exchange program than do the Americans. However he urges that the program continue.

Voronel met informally with reporters in Washington recently. He is touring this country under cosponsorship of the Committee for Concerned Scientists and the National Conference on Soviet Jewry, to meet with both American politicians and physicists. Voronel is a solid-state physicist.

He described Soviet scientists and the officials who control them as desperately eager for travel abroad for both material and intellectual reasons.

"The brains of Russians and Americans may be the same but their up-

bringing is different. There is a constant lack of ideas in Russian science. There are great gaps in our science. We have strength in details but very few new ideas. The current for new ideas comes always from the West."

Voronel accused Soviet officials of "systematic stealing of technology" from the West. He alleged that the "stealing" takes place literally through clandestine means and, more generally, through taking advantage of ordinary contacts with Westerners. One reason for this, he said, is that Soviet officials don't trust their own intellectuals. They frequently hold up Western technology as an example to their own scientists. Soviet scientists, as well as officials and their families, also use the exchanges to buy consumer goods, which they can obtain more cheaply abroad than in their own country.

What can Americans get from the exchanges? Soviet science can offer the United States much on an individual basis, Voronel says, since some Soviet scientists are exceptionally good. For the rest, "you can have many friends . . . It's not short term profit. But in the long term, it will be very useful for Western people" because "their influence will be raised in Soviet society." Voronel advised Western scientists participating in exchanges to make as many informal contacts as possible, and not to see only these people whom the authorities want them to.

Voronel is best known for having organized a weekly seminar in his Moscow apartment for scientists like himself who had lost their jobs after applying to live in Israel. After trying to hold an international version of the seminar last summer, he went into hiding to avoid arrest, and was subsequently allowed to leave the country. His successor in holding the weekly seminars, Marc Azbel, was recently prevented from returning to Moscow, according to recent reports, and Victor Brailovsky, a cyberneticist, ran the seminars in his stead. Brailovsky too, reportedly has been threatened with arrest recently by the Soviet secret police.—D.S.

passed bill would have allowed spoil to be left on the downslope only "temporarily," but this was given up in the House-Senate conference.

Another major point on which the House yielded in conference, much to the disappointment of Dunlap and other environmental lobbyists, had to do with the protection of alluvial valleys in the West. In regions such as the Northern Great Plains, where a coal rush is under way, these valleys are an essential complement to the vast range lands in the ranching economy, even though they usually are only a small part of any given region. Without the hay and other forage crops grown in these valleys to tide livestock over the winter, the range lands that sustain the animals the remainder of the year become of little value.

The conflict here between mining and agriculture arises because under some of these valleys are thick seams of coal—an estimated 5 percent of the strippable coal in the Northern Plains' Powder River Basin is in alluvial valleys. Moreover, this

coal can be particularly profitable to mine because it usually lies beneath an easily removable overburden.

The House bill had flatly prohibited all mining in alluvial valleys and had held that there must be no alternation of significant stream channels and no adverse effects on the quality or quantity of the ground or surface water flowing into these valleys. Taken together, these restrictions would have had the effect of forbidding strip mining over wide areas. Accordingly, all were dropped in conference in favor of more general language requiring the denial of permits in cases where there would be a "substantial adverse effect" on valleys of actual or potential agricultural value or where there would be a disruption of "essential hydrologic functions."

The environmental lobbyists' fear is that, in the lawsuits that will inevitably arise over these vague provisions, the ranchers will be at a major disadvantage, lacking as they do the money for prolonged and costly court battles. In fact, Dunlap's basic criticism of the bill is that,

in her view, some of the provisions dropped would have made it much easier for citizens to obtain faithful implementation and enforcement. But Dunlap's chief concern at the moment is to see that the strip mining bill becomes law, whatever its present defects.

Indeed, the real question now is whether the President will sign the bill, and whether, in the event he does not, a two-thirds majority can be mustered in both the House and Senate to override the veto. To judge from the majorities that have been behind the strip mining legislation, such a congressional override would indeed be possible. The House approved the conference report by 293 to 115, or by 21 votes better than the majority necessary in a showdown with the White House.

To give the White House further pause in contemplating a veto, Senator Lee Metcalf (D-Mont.), manager of the bill in the Senate, will introduce legislation to continue the present moratorium on federal coal leasing until there is a strip mining law.—LUTHER J. CARTER

Prisons: Faith in "Rehabilitation" Is Suffering a Collapse

People are sent to prison for several reasons—punishment, restraint, deterrence, and rehabilitation. Rehabilitation means, in the narrowest sense, to effect some change in an individual that will reduce the likelihood of his running afoul of the law again.

The American criminal justice system, and the social scholars who concern themselves with it, are now in the midst of what one of them calls a "massive retreat" from rehabilitation. Disillusionment is such that there are no programs, either within prisons or in communities, whose worth has not come into question. But it is on in-house attempts at rehabilitation that the conflicts and frustrations are most sharply concentrated.

An apparent symptom of this trend away from rehabilitation is the recent resignation from the Bureau of Prisons (BOP) of psychiatrist Martin Groder, who was to be the warden of a new federal correctional facility now under construction in Butner, North Carolina (*Science*, 2 August 1974). The new prison, the Federal Center for

Correctional Research, is, or was supposed to be, the proving ground for BOP's first large-scale effort at evaluating rehabilitation programs. BOP chief Norman Carlson says the prison's objectives haven't changed, but Groder believes that the circumstances that brought about his resignation (Carlson wanted to transfer him to Illinois) are all part of a turnabout in federal correctional philosophy that will make it impossible for Butner's mission to stay intact. Certainly the federal prison system is overcrowded and BOP is anxious to phase out antiquated facilities, so it is fair to question whether the bureau can afford to have a new institution entirely given over to the conduct of and research on treatment and rehabilitation programs. Besides, Groder, despite a tendency toward rash outspokenness, was a rare bird in the prison system—being talented, innovative, and committed to prison work. The Butner facility was Groder's show, and without him at the helm no one can be sure what form the new prison will take.

It should also be noted that the Butner

facility got a lot of adverse publicity from the start, and BOP was never able to overcome certain assumptions widely held among people concerned with prisoners' rights and the rights of research subjects. These have been that Butner would be used for a variety of unsavory techniques that have been accumulated under the rubric of "behavior modification." In fact, behavior modification—which among professionals commonly denotes positive reinforcement for approved behavior—and not the opposite—negative reinforcement or aversive conditioning—was not among the programs planned for Butner. One authority believes Butner had simply become too much of an "embarrassment" to BOP and a change was in order.

At any rate, additional forces have been at work. Following the Attica disaster in 1971, corrections experts shifted in favor of prisons as places of rehabilitation. The President's Advisory Commission on Criminal Justice Standards and Goals made much of prisons as "schools for crime" and gave impetus to the development of community-based corrections programs. As for those who needed to be put away to protect the community, much was made of the "right to rehabilitation." Although state systems vary greatly, it has been common practice to evaluate prisoners and recommend appropriate courses for treatment—vocational, educational, and psychotherapeutic. The element of coercion is sometimes overt, sometimes