

Research restriction diluted

The curtailment of basic research sponsored by the Department of Defense, brought about last year by the so-called Mansfield Amendment to the 1970 Military Procurement Authorization Act, has been at least momentarily weakened during the passage's recent meanderings through the legislative maze.

As originally worded in the controversial Section 203 of the bill, the law stated that basic research funded by DOD must be directly related to specific military need or function. Its passage resulted in confusion, misunderstanding and vitriolic debate, both in and out of Congress. Scientists argued it cut off one of the most important sources of funds for basic research (SN: 5/23, p. 501).

In Senate action earlier this year on the 1971 authorization bill, an attempt at clarification was made by modifying the Mansfield Amendment. The clarification expressed the sense of Congress that Defense basic research should not be further curtailed and that there should be an orderly transfer of certain research to the National Science Foundation.

But in early October a House-Senate conference committee, convened to iron out differences in the authorization bills from both Houses, effected a more significant weakening of the provision's language: Such research would be prohibited unless "in the opinion of the Secretary of Defense" the project has a "potential relationship to a military function or operation." And that is where it hangs now. Congress recessed until Nov. 16, when lame ducks return to both Houses, a situation Senate Majority Leader Mike Mansfield (D-Mont.) has called a "disaster."

Although little opposition is expected to passage of the authorization bill in the House, there will be a fight in the Senate. Vigorous dissent already has been expressed by Senators Mansfield and William Proxmire (D-Wis.), who have called the amendment change a "blank check" to the Pentagon on basic research expenditures. Sen. Mansfield has labeled the present wording ". . . a legislative act of abdication to the Secretary of Defense." He, and others, will attempt restoration of the original language in Section 203.

Rep. Emilio Daddario (D-Conn.) opposed the original amendment and declared it caused "confusion, uncertainty and anxiety" throughout the scientific community. Of the revised Section 203, the chairman of the Subcommittee on Science, Research and Development says: "Given the fundamental nature of basic research, this language is about as

clear and precise as any limitation on basic research can be. . . ."

Meanwhile, after one rejection Rep. Daddario has tried for the second time through Presidential Science Adviser Dr. Edward E. David Jr. to arrange a joint executive-legislative conference to clarify policy on the Federal support of basic research. Any response to this second request, written Oct. 12, had not been made public this week. But the Congressman was still urging such a meeting prior to submission of the 1972 Federal budget request by the President in January. □

ENVIRONMENT

First DDT, now PCB

The polychlorinated biphenyls (PCB's), a class of industrial compounds with a wide variety of uses, have been suspected since 1966 of causing many of the same ill effects in organisms as DDT and other chlorinated pesticides. Gradually the evidence has accumulated, and now there is little doubt of their danger (SN: 3/28, p. 321).

Depending on the degree of chlorination, the PCB's are as toxic or more toxic than DDT. One experiment, for example, established that a PCB with 62 percent chlorine was almost twice as effective as DDT in breaking down the sex hormone estradiol in birds; this is regarded as the initial step in the mechanism by which egg shells of predatory birds (which have very high tissue concentrations of both chlorinated pesticides and PCB's) are thinned, leading to high chick mortality and eventual extinction.

The most recent evidence came this month from the work of Drs. Lawrence McCloskey and Richard Cheshier, who exposed corals to chlorinated pesticides and PCB's while they were Tektite 2 aquanauts (SN: 10/10, p. 296). PCB's apparently act synergistically with chlorinated pesticides and enhance their effects, says Dr. Cheshier. One of the potentially most serious results of the work was the finding that a mixture of PCB's and chlorinated pesticides will reduce oxygen production by plants associated with the coral after a relatively brief exposure at one part per million.

In the meantime, Monsanto Co., the sole United States manufacturer of PCB's, has greatly restricted the uses of these compounds, claiming it is now recommending use only as insulating fluids in electrical and heat transfer systems where the PCB's are completely enclosed and thus not likely to get into the environment.

But, says Dr. Robert Risebrough of the University of California at Berkeley, a long-time foe of PCB's: "I'm not very optimistic. This electrical equipment is

going to be thrown away eventually. With an expanding technology, I am afraid we will continue to have large amounts of these chemicals entering the environment."

And just how the PCB's have entered the environment—where they are now ubiquitous, although there are greater amounts near industrial areas—is still unknown. But many of the uses before Monsanto's Aug. 30 restrictions clearly were capable of releasing large amounts into the environment. Among these uses: plastizers, coatings for paper and fabric, fire-retardant compounds, asphalt, adhesives, paraffins, printer's ink, rubber products, solvents for pesticides, lacquers, coatings for water-repellent canvas and as hydraulic fluids.

Recent work, however, has begun to provide at least an indication of sources, says Dr. Risebrough. PCB's have been found, he says, in municipal sewage entering Lake Michigan and in California. Further work may allow researchers to learn just how the PCB's enter the sewage.

Hampering the work has been Monsanto's reluctance to cooperate, claims Rep. William F. Ryan (D-N.Y.) a crusader against PCB's. Ryan says Monsanto has refused to provide him with a list of all uses, claiming this "would serve no useful nonpolitical purpose." And Dr. Risebrough says Monsanto also has refused to provide statistics on amounts of PCB's manufactured. A Monsanto spokesman admitted both charges this week, saying secrecy was necessary because Monsanto is the sole producer of PCB's.

The PCB's have unique advantages industrially because of their chemical stability. This stability is called persistence, however, in substances such as PCB's and chlorinated pesticides that do not degrade in the environment and thus are concentrated in food chains. Says Dr. Risebrough: Badly needed are programs for assessing the environmental impacts of new commercial substances before they become so widely used that we are economically dependent upon them. □

DRUG CONTROL

Tough bill plus research

Drug addiction is regarded as a medical problem and not solely a criminal act in the newly passed Comprehensive Drug Abuse and Control Act of 1970. This is the result of vigorous efforts by physicians and scientists working with a handful of like-minded legislators, among whom Sen. Harold E. Hughes (D-Iowa) and Rep. Paul Rogers (D-Fla.) were most prominent.

The initial Administration-backed bill was a harsh, punitive and enforcement measure (SN: 4/4 p. 339).