to prevent deterioration of man's environment. Once this is accomplished, policing becomes an insignificant facet of pollution control.

Summary

Evidence indicates that Alaska is on the threshold of economic expansion. The magnitude of the expansion is unknown, but any expansion is certain to increase pollution pressures. Because Alaskan waters are, for the most part, still clean, a unique opportunity exists to apply a preventive program based on ecosystem dynamics, instead of the classical practice of cleanup after deterioration has set in. Research on the tundra and taiga ecosystems must be initiated to learn the dynamics of ecological response to man's quest for new resource development. Imaginative engineering innovations must be applied toward solving the immediate problems while awaiting research findings that accrue slowly over time. An accelerated, continuing education of industry and all others who are potential polluters must be initiated. All the research, engineering, standards, and regulations in the world will not prevent the ultimate destruction of our environment unless we all accept our responsibility to prevent this destruction. Pollution prevention will make great strides when we devise means, through economic analysis, to show that esthetics and society's acceptance of the costs of pollution control are imperative to man's survival, health, and happiness. Then we will no longer think in terms of how heavily we can load a stream with wastes, but how clean we can get it and how we can maintain it in this enhanced condition.

References and Notes

- L. S. Rockefeller, The Third Wave (Conservation Yearbook No. 3, U.S. Government Printing Office, Washington, D.C., 1967).
 "Waste management and control," report by Committee on Pollution, National Academy of Sciences National Research Council by
- of Sciences-National Research Council, to Federal Council for Science and Technology, NAS-NRC Publ. 1400 (1966), appendix 1, pp. 31–63.
- 3. W. O. Pruitt, Animals of the North (Harper and Row, New York, 1967), pp. 1-5; 151-
- 4. Personnel of Institute of Marine Sciences, University of Alaska (1968), private communication.
- C. Wahrhafig, "Physiographic divisions of Alaska," U.S. Geol. Surv. Prof. Pap. No. 482 (1965).

- O. J. Ferrians, Jr., compiler, "Permafrost maps of Alaska," U.S. Geol. Surv. Misc. Geol. Inv., Map I-445 (1965).
- 7. Population projections show depending on the optimisms at the time of projection: present economic conditions stify an optimistic view.
- 'Alaska's petroleum industry" (Inst. of Social. Economic and Government Research, Univer-
- sity of Alaska, College, 1968).

 9. R. E. Haring and M. R. C. Massie, "A survey of the Alaska forest products industry," Res. Monogr. No. 8 (Inst. of Social, Economic and Government Research, University
- f Alaska, College, 1966). The fur industry in Alaska" (Inst. of Social, Economic and Government Research, University of Alaska, College, 1966).

 11. "The gold mining industry in Alaska" (Inst. of Business, Economic and Government Re-
- search, University of Alaska, College, 1965).

 12. "Alaska fisheries industry" (Inst. of Social, Economic and Government Research, University of Alaska, College, 1965).
- 13. "The nation's water resources," U.S. Water Resources Council (1968).
- 14. An example of these in the Parson Engineering Plan, commonly known as NAWPA.
- neering Plan, commonly known as NAWPA.

 15. During a prolonged cold spell in January 1969, dissolved oxygen dropped to 1.8 mg/liter [P. Frey, Alaska Water Laboratory, College (1969), personal communication].

 16. A. Calhoun and C. Seely, "Logging damage to California's streams in 1962," Island Fisheries Administration Rep. No. 63-2, Reseases Agency of California (1963).
- sources Agency of California (1963).
- 17. A national policy for the environment, hearings before a joint House-Senate Committee, 90th Congress, 2nd Session, No. 8, 17 July 1968.
- private communication.
- Personnel of Institute of Marine Sciences, University of Alaska, College (1968), private

NEWS AND COMMENT

Foundations and the Tax Bill: Threat to the Private Sector?

About a year ago, Alan Pifer, president of the Carnegie Corporation, offered a prophetic warning for the philanthropic foundations, which even then stood closer to the brink than Pifer realized. "The danger which foundations have faced in recent years, and perhaps never more so than today," he wrote, in Carnegie's annual report, "is that public loss of confidence in them, occasioned by limited, but continuing and well-publicized disclosure of abuses, will become great enough to precipitate Congress into a hasty and clumsy piece of legislation." Pifer, who was and is chairman of the Foundation Center (a foundation service and information organization), was appealing to the foundation world to put its house in order through self-regulation, but,

even had this been promptly accomplished, the hour already was late.

If the present session of Congress ends without the foundations' suffering heavy penalties, Pifer and other leaders in the field, such as McGeorge Bundy of the Ford Foundation, will be shown to have a better line of credit with Providence than they are now generally thought to possess. The tax reform bill passed by the House (Science, 15 August) is in some respects for the good of the foundations but, generally, it deals them a heavy blow.

The bill is a stupefying document, so complex that nobody seems really to understand it, and it affects foundations in many different ways, only a few of which can be gone into here. It would, among other things, impose a 7½ percent tax on foundation income (hence reducing funds for beneficiaries) and forbid not only foundation lobbying but also prohibit, in language which many consider dangerously ambiguous, activities "affect[ing] the opinion of the general public" on legislation.

The House bill has been rewritten by the Senate Finance Committee and is now being considered by the Senate as a whole. From the foundations' standpoint the Finance Committee has improved the bill in most particulars, yet from this committee comes the unkindest cut of all-a proposal for a "40-year death sentence." The taxexempt status of new foundations would be limited to a 40-year life; existing foundations would keep their tax-exempt status for no longer than 40 years.

These misfortunes suffered by the foundations were brought on by an unusual combination of circumstances. First, there was the much discussed "taxpayer's revolt," coupled with reports of tax dodging by foundation donors and of "self-dealing" by some of the smaller or lesser known foundations (as, for example, when someone who has established a foundation makes a tax-deductible gift to it but then borrows the money back on easy terms). Along with this came disclosure of such egregious cases as the one involving the Wolfson Foundation and its \$20,000-a-year arrangement with Justice Abe Fortas. There was also the furor over certain Ford Foundation—supported projects, such as the New York school decentralization project which led to a prolonged teachers strike and the Cleveland voter registration project which may have contributed to the election of Carl Stokes, Cleveland's first Negro mayor.

Instruments of Plutocracy

And, of course, amid all this, there were the continuing attacks on foundations by politicians such as Representative Wright Patman of Texas, an old-fashioned Populist who regards foundations as instruments of plutocracy. In February, appearing before the House Ways and Means Committee, Patman spoke of the foundations' "propensity for domination of business and accumulation of wealth" and said that they "fiddle while the small businessman, the farmer, the individual citizen, pay the tax bills—and burn."

Final congressional action on the tax bill should come within the next few weeks. Insofar as the foundations are concerned, the two principal questions likely to be in hot dispute are these:

• The tax issue. The argument will be concerned with whether foundations should be taxed on their income, as the 7½ percent levy voted by the House would provide, or whether they should merely pay an annual "audit fee" based on their assets (the fee would cover the administrative costs entailed by the Internal Revenue Service in overseeing compliance with those provisions of the revenue code related to the foundations). The Senate Finance Committee, following the advice of the Department of the Treasury, has recommended the audit-fee approach, and presumably the Senate will act accordingly. In that case, the issue will be decided by the House-Senate conferees.

The financial burden imposed by the fee would be only about half that imposed by the tax. But the crucial thing, in the minds of foundation leaders, is to avoid breaking precedent by imposing a tax and flouting the heretofore accepted principle that all kinds of charitable organizations (whether foundations, universities, hospitals, churches, or other institutions) should be treated alike with respect to tax status.

• The 40-year-life issue. In the House Ways and Means Committee, which shaped the House tax bill in its entirety (in the House, no floor amendments are permitted on tax bills), the question of limiting the life of the foundation's tax-exempt status was discussed but never voted upon. The 40year-life proposal was accepted by the Finance Committee at the urging of Senator Albert Gore (D-Tenn.), whose two earlier proposals for a 25-year life and a 33-year life were rejected by wide margins. No hearings had ever been held on the question, and the committee had little to go on except Senator Gore's unsupported assertion that to allow a foundation to exist in perpetuity is to allow the "dead hand" of the founder to the rule the living. (No evidence has been adduced to show that the late Henry Ford is quarterbacking for McGeorge Bundy.)

Senator Carl T. Curtis (R-Neb.), who is strongly opposed to limiting the life of the tax exemption, told *Science* that he doubted the 40-year death sentence will be enacted. He indicated, however, that the best tactic would be to seek to kill it in conference rather than on the Senate floor. "If we lost on the floor," he said, "it would make it harder to eliminate in conference."

Whether the foundations do have a good chance of escaping the tax and death sentence is, at this point, very much a matter of conjecture. On the tax issue, for instance, from talking with committee sources one gets varying indications as to the probable outcome. However, inasmuch as the Senate Finance Committee position is also largely the Nixon Administration position, the odds would seem to favor adoption of the audit fee rather than the tax.

In view of their widespread benefactions and the high position in business, industry, and education of the men who serve on their boards of trustees, it is remarkable that the foundations have gotten into so much trouble with Congress. In Harper's some 4 years ago, Philip M. Stern, grandson of the late Julius Rosenwald (one of American philanthropy's more venturesome figures) and author of The Great Treasury Raid (a book on the problems of tax reform), wrote an "open letter" to the Ford Foundation, which was then undergoing a change of command (Julius A. Stratton had just assumed the position as chairman of the board, and the appointment of Bundy as president was still in the

making). Stern chided the foundation for what he regarded as its tendency to shrink from controversy and its failure to pursue a bolder, more pathfinding course.

"Of course," he said "your lawyers—and perhaps your more apprehensive trustees—are likely to advise caution lest Ford's tax exemption be revoked. Realistically, though, such drastic retribution against a foundation whose generosity has been felt and appreciated in every state and most congressional districts in this land is about as likely as Congress abolishing its own Rivers and Harbors Committee." While this view seemed not unreasonable 4 years ago, now one wonders.

In their struggle over the tax bill the foundations have received some support from universities and other foundation beneficiaries, but this support has not been massive and, obviously, not yet particularly telling. The universities, museums, and other institutions have had their own problems with the tax bill, and, understandably, their tendency has been to put these first. "In general, I've been disappointed at what the beneficiaries have done for the foundations," Nils Y. Wessell, president of the Alfred P. Sloan Foundation, told *Science*.

A provision of the Senate Finance Committee bill to be debated before final congressional action on tax reform is one forbidding all foundation support of voter registration activities. In this provision can be seen the fine hand of some Southern senators on the committee who are poorly served by efforts to bring blacks to the polling place. The voter registration question seems likely to be treated more as a civil rights matter than as an issue vital to foundations (though Bundy and leaders of some other foundations that have supported voter registration work view the issue as an important one).

The Lobbying Issue

The question of how the tax bill shall deal with "grass-roots" and congressional lobbying by foundations may have been resolved by the Finance Committee. Present law says that no "substantial" part of a foundation's work may consist of activities aimed at influencing action on specific pieces of legislation. The committee decided that, in the main, the provisions of existing law should be retained but that the substantiality test should be eliminated and foundations barred entirely from engaging in or supporting lobbying.

However, the examination of "broad problems of the type the government could be expected to deal with ultimately" would not be proscribed, and foundations could provide advice on legislation if requested to do so by a committee or member of Congress. According to Senator Curtis, one of the foundations' principal defenders in the Finance Committee, the antilobbying provision as rewritten by the committee is as permissive as any likely to be passed this year.

While only the Senate bill includes a death sentence for foundations, both the Senate and House bills contain a "birth-control" provision. Wealthy benefactors would be discouraged from making gifts of appreciated property to foundation endowments. The bill would accomplish this by allowing the benefactor a much greater tax break on gifts of such property if they are made to schools, hospitals, and other institutions. This discriminatory provision can be regarded as highly damaging if one takes the view that, given the relatively limited sums available to private philanthropy (by comparison with the huge sums spent by government), the public interest is often best served by having gifts distributed by a well-staffed foundation rather than by individual donors.

It can be argued, for example, that, while a wealthy donor's gift of a few million dollars to a university may be of marginal effect, the same amount given by an imaginative foundation staff for an experimental program (Headstart was begun with foundation support) may lead to results of enormous social value. Yet, despite its sweeping implications, the birth-control provision has received slight attention and has brought forth relatively little protest, from foundations or others.

The provisions of the House and Senate bills forbidding self-dealing and other tax abuses appear to be regarded by most foundation leaders as desirable and generally well devised. In fact, it is now apparent to some of these leaders that the foundations should have campaigned energetically for enactment of such reforms when they were first recommended by the Department of the Treasury in 1965.

Another major provision virtually certain to become law is one requiring foundations to distribute all of their annual income and, ultimately (after a transitional period), to distribute each year an amount equal to not less than about 5 percent of their assets.

NEWS IN BRIEF

- NONPROLIFERATION PACT IS SIGNED: President Nixon on 24 November signed the Nuclear Nonproliferation Treaty, which was ratified and signed on the same day by the U.S.S.R. West Germany and Switzerland announced later that they had signed also. The treaty will go into effect when 43 nations ratify it and deposit copies of their ratification in the United States. Russia, or the United Kingdom. Twenty-two nations have completed the ratification process. All the nuclear powers except France and Communist China have signed, and those two countries have said they will not sign the treaty.
- DOW QUITS NAPALM BUSINESS: Dow Chemical Co., target of antiwar protesters for its manufacture of napalm for the Vietnam war, has stopped making the incendiary jelly. A Dow official said the contract ran out last May. Dow bid for a new contract during the summer but the Defense Department awarded the contract instead to the American Electric Co. of La Mirada, Calif. A rumor reported in the Wall Street Journal says the company deliberately bid high in order to lose the contract and thus ease the pressure it has been under from protesters.
- INTERNATIONAL SPACE EX-PLORATION: The Senate has adopted a resolution authorizing the Committee on Foreign Relations to study the possibilities for international cooperation and cost sharing of space exploration. The resolution, introduced by 13 senators including Goodell, Muskie, McGovern, McCarthy, and Mondale, spells out two possibilities to be studied: establishment of an international consortium for space missions (similar to Intelsat and Comsat); and utilization of the United Nations organization. Senator William Proxmire (D-Wis.), who introduced the resolution. said the benefits of space exploration are shared on an equal basis, so costs should be also.
- NEW SCIENCE POLICY PUBLICATION: A new bulletin on science policy is being published in Great Britain. Two newsletters have been combined—The British Science of Science Foundation Ltd. Newsletter and the Organisation for Economic Cooperation and Development Science Policy

Information Bulletin—to form Science Policy News. A 1-year subscription to the new bulletin costs \$8 and can be obtained from Science Policy News, Science of Science Foundation Ltd., Benjamin Franklin House, 36 Craven Street, London W.C.2, England.

- AAAS-WESTINGHOUSE SCIENCE WRITING AWARD WINNERS: Winners for the AAAS-Westinghouse science writing contest have been chosen. In newspapers with more than 100,000 daily circulation, Irving S. Bengelsdorf is the winner for an article on germ warfare, an article on ABM, and five columns about "Atoms and Men" in the Los Angeles Times (October 1968 to September 1969). In newspapers with less than 100,000 daily circulation, William Helton is the winner for two series, one on noise in Honolulu, the other on oceanography in Hawaii in the Honolulu Advertiser (July to September 1969). In magazines, Arthur C. Clarke is the winner for an article entiled "Next-The Planets," in Playboy (March 1969). Each first-place winner will receive \$1000.
- MAN OUTGROWS EARTH: A gloomy report issued by a committee of the National Research Council warns that the supply of vital natural resources soon will not meet the demands of an expanding population. Resources and Man suggests that the government establish a high-level group of resource specialists and ecologists to maintain surveillance of resources, to inform the public when shortages will occur, and to recommend remedies for shortages. The report also stresses the need for population control (Science, 7 November). It may be obtained for \$2.95 paperbound (\$5.95 clothbound) from W. H. Freeman and Co., 660 Market St., San Francisco, Calif. 94104.
- PSAC REPORT ON SPACE FLIGHT: The space science and technology panel of the President's Science Advisory Committee has released a report which recommends that NASA develop a biomedical research capability and research program to strengthen the biomedical foundations of manned space flight. The Biomedical Foundations of Manned Space Flight can be obtained for 45¢ from the Government Printing Office, Washington, D.C.

(The mandatory "payout" is not, however, fixed at a flat 5 percent; the Secretary of the Treasury would be authorized to adjust the rate, either upward or downward, in keeping with changing interest rates and stock yields.) A foundation consistently earning less than 5 percent on its investments would be forced repeatedly to dip into principal and, in time, would face a problem of vanishing assets. The theory here is that foundations were granted tax-exempt status in the name of charity and that they should either contribute substantially to charitable activities or go out of business.

Some foundation leaders think that a mandatory payout is a bad idea, while others think it is a good oneand leaders of a few small, aggressively innovative foundations (such as the New World Foundation and the Field Foundation) believe that the current need for philanthropic support is so urgent that a payout even greater than 5 percent should be required. Byron P. Hollet, a director of the \$580-million Lilly Endowment, has testified against the mandatory payout, indicating that it would stunt the growth of foundations by forcing them to convert lowpaying growth stocks into fixed-income securities. Pifer, on the other hand, believes that a 5 percent payout minimum would allow a margin for growth and should be required. "All that you need for an adequate bill are the payout requirement and the provision against self-dealing," he says.

Humiliating Experience

Even if upon final passage, the tax bill's foundation section contained only these two provisions (which clearly is not the prospect), the foundations would have been put through a humiliating experience. The mere fact that a 40-year death sentence and a tax have received serious congressional consideration is itself evidence that a surprising number of people believe foundations do not fully qualify as philanthropic enterprises.

Although it is now too late for foundations to escape punitive legislation altogether, they may be able to refurbish their public image a bit by moving toward self-regulation. Accordingly, The Foundation Center and two other organizations, the Council on Foundations and the National Council on Philanthropy, have drafted a set of standards for foundations and have proposed that a committee be

established which would try to encourage their observance.

Some of the proposed standards, such as those related to self-dealing and payout, will be covered by the tax reform bill, but there are others which will not be. For instance, there would be standards having to do with the making of public reports (beyond those required by law) and with the staff work and professionalism that should go into the awarding of grants.

There are at least 22,000 foundations in the United States, a great many of which are small family affairs which have no staff and often not even an office. Just how all members of this vast multitude can be brought into compliance with a reasonably demanding set of standards is not clear. The strongest incentive for compliance might be the fear that failure to receive certification would attract the attention of the Internal Revenue Service.

Last spring, John D. Rockefeller III, acting on behalf of several of the major foundations to follow up a suggestion of Pifer's, set up a Commission on Foundations and Private Philanthropy, with Peter G. Peterson, president of Bell & Howell Company, at its chairman. In October, Peterson appeared before the Finance Committee and made a preliminary report. He said that the effort of responsible foundation groups to begin policing the field was commendable but that their effectiveness would be limited by "lack of sanctions."

His report indicated that a payout requirement was badly needed. Stock held in the investment portfolios of foundations has an extraordinarily low rate of turnover (between 1 and 2 percent a year), Peterson said, yet performance of foundations with respect to earnings and payout is often poor. "Among reasons we have been given [for the low turnover] are that a good deal of the stock is often control stock in a company and it has not been considered appropriate to trade these securities," he added (though most of the major foundations have well-diversified investment portfolios).

Peterson said that the cost to society of the foundations' subpar performance in handling their investments could easily run to hundreds of millions of dollars annually and perhaps over a billion. He took the unsentimental view that, while people have mixed motives in setting up foundations (with the desire to perpetuate control over a

business often being a key motive), this need bother no one if foundations are forced—through a payout requirement—to live up to their charitable purposes.

The Peterson report concluded with a call for the establishment of a quasigovernmental Philanthropic Policy Board, to be composed of 10 to 15 top-level private citizens and government officials, with the majority from the private sector. One of this board's chief duties would be to make periodic assessments of government policies and programs that affect foundations and philanthropy generally. For example, the report said that the board might encourage the development of a new tax structure which would provide incentives for increased contributions to philanthropy, without unreasonable cost to the Treasury and without disregard for tax equity.

Although Peterson's recommendation for a policy board does not seem to have aroused much interest in foundation circles, such a board might help to bring about a better understanding of the role of foundations and philanthropy in American life. It is apparent that, at the moment, Congress is doing much of its legislating in the dark where philanthropy is concerned.

Erosion of the Private Sector

Indeed, foundation leaders such as Julius Stratton and Pifer have been dismayed to discover what they regard as a widespread failure among members of Congress to appreciate the importance of maintaining the strength of private institutions and the diversity of resources and initiatives which they provide. In Stratton's view, the conservatives in Congress, who, one might think, would be the ones most solicitous of protecting the private sector, generally have "no thought-through position" and are contributing to the erosion of that sector.

Senator Curtis, a conservative Nebraskan, is viewed as an exception. In a floor speech in October, Curtis said that some of the House bill's foundation provisions "represent nothing short of an all-out assault on the concept of pluralism." By discouraging philanthropy, the tax bill would, he said, force organizations which depend on private funding to turn in increasing numbers to Washington. "If federal assistance is forthcoming," he added, "collective national judgments will be substituted for local and individual choices."—LUTHER J. CARTER