central Rio Grande Valley, can be most easily explained in terms of the Paleo-Indian adaptation to a megafaunal water source. Site locations were selected which would take fullest advantage of the megafaunal dependence on water. As the character of these water sources changed during the early postglacial period, PaleoIndian site situations were altered to adapt to these changing circumstances. Although there has been some debate about the nature and extent of the altithermal period (*8*), there is little doubt that, in general, postglacial climatic conditions were somewhat drier than those of terminal Wisconsin times (*9*). It is suggested that this gradual change toward increasing dryness may explain much of the intercultural variation in Paleo-Indian settlement technology within the survey area.

Further, it was noted that significant intracultural variation in PaleoIndian settlement technology can be documented for the Folsom and Belen assemblages on the basis of variations in activities performed as evidenced by specific articulations of selected environmental and lithic components. More adequate data for Clovis and Eden would undoubtedly permit the recognition of similar variation in these cases also. The subcultural patterns were found to be quite similar for Folsom and Belen. For both cultural phases, base camps represent multiple activities, while the two other types of settlement loci represent activities of a more specific nature. Armament sites were used primarily for the production of weaponry and are located in strategic overview situations that permit visual reconnaissance of the hunting area. Processing sites were used for hide-working and other maintenance tasks and are located close to sources of water. It is suggested as a hypothesis that a sexual division of labor may be involved in the distinction between the two task locations.

It is hoped that other regions will yield PaleoIndian data of a comparable nature so that similar analyses can be undertaken. If so, the information derived from this survey may prove helpful in the framing of questions appropriate to attaining a better understanding of the adaptive strategies of early hunting groups on this continent.

References and Notes

1. See H. M. Wormington [*Ancient Man in North America* (Denver Museum of Natural History, Denver, ed. 4, 1957)] for a general description.
2. E. M. Baker, paper read at the 33rd annual meeting of the Society for American Archeology, Santa Fe, New Mexico, 1968.
3. W. J. Judge, dissertation, University of New Mexico (1970).
4. J. Dawson and W. J. Judge, *Plains Anthropol.* **14**, 149 (1969). A similar situation has been noted in the Llano Estacado [F. Wendorf and J. J. Hester, *Amer. Antiquity* **28**, 159 (1962)].
5. H. M. Wormington (*1*) provides the most comprehensive review. See also ——— and R. G. Forbis, *An Introduction to the Archeology of Alberta, Canada* (Denver Museum of Natural History, Denver, 1965); H. T. Irwin, dissertation, Harvard University (1968); R. J. Mason, *Curr. Anthropol.* **3**, 227 (1962); R. Shutler, Ed., *Arctic Anthropol.* **7** (No. 2), 1 (1971).
6. An excellent critique of the major work on lithic technology by S. A. Semenov [*Prehistoric Technology* (Barnes & Noble, New York, 1964)] is provided by F. Bordes [*Arctic Anthropol.* **6** (No. 1), 1 (1969)].
7. W. J. Judge, *Southwest. J. Anthropol.* **26**, 40 (1970).
8. E. Antevs, *Amer. Antiquity* **28**, 217 (1962); P. S. Martin, *The Last 10,000 Years* (Univ. of Arizona Press, Tucson, 1963); C. V. Haynes, Jr., *Geochronology of Late Quaternary Alluvium* (Interim Research Report 10, Univ. of Arizona Geochronology Laboratories, Tucson, 1966).
9. W. Dort, Jr., and J. K. Jones, Jr., Eds., *Pleistocene and Recent Environments of the Central Great Plains* (Univ. of Kansas Press, Lawrence, 1970).

10. Supported in part by a grant from the American Philosophical Society. We thank many friends and students for their invaluable contribution to the survey, particularly Ele Baker, Jewel Baker, and Dennis Stanford.

NEWS AND COMMENT

Rainmaking: Rumored Use Over Laos Alarms Arms Experts, Scientists

For the past year, rumors and speculation, along with occasional bits of circumstantial evidence, have accumulated in Washington to the effect that the military has tried to increase rainfall in Indochina to hinder enemy infiltration into South Vietnam—in effect, using the weather as a weapon of war. But Pentagon officials have been extremely tight-lipped about it, even to prominent members of Congress, and it appears that the old saying is now turned around: The generals are probably doing something about the weather, but nobody's talking about it. *The Pentagon Papers* makes references to such activities as having been successfully carried out in Laos, and a Jack Anderson column in the Washington *Post* a year ago described a top-secret operation over the Ho Chi Minh trail.

The only denial so far has come from Department of Defense (DOD) Secretary Melvin R. Laird in congressional testimony. However, all Laird denied was the use of weather control "over North Vietnam," and, since the Anderson column and *The Pentagon Papers* concern Laos and the Ho Chi Minh trail, which runs through Laos and Cambodia, no real answers to the speculations have been provided.

The DOD has admitted that various forms of climate modification have been considered by the military for more than 20 years. A well-known geophysicist formerly with DOD's Institute for Defense Analyses, Gordon J. F. MacDonald (who now sits on the Council for Environmental Quality), wrote a Cassandra-like chapter on potential geophysical warfare in 1968, which described control of rainfall, drought, earthquakes, and even possible tinkering in the Arctic.* The Indochina allegations are limited to charges that the DOD has augmented rainfall to muddy up trails, thus hindering the flow of men and vehicles to the south, but some scientists and arms experts regard even this limited activity as a camel's nose under the geophysical tent.

The issue has an important scientific dimension, too, for meteorology is one of the most internationally minded of all scientific fields. Many prominent U.S. meteorologists have for years favored a ban on military uses of weather control. Describing their reactions even to the possibility that these techniques have been used, they use such words as "distressed," and "appalled." They add that weather control in Indochina could hurt international, peaceful weather research. Hence, the issue of whether the DOD has been, or might be, seeding clouds over Asia holds implications beyond the horizons of Indochina alone.

The only direct evidence that

* G. J. F. MacDonald, "How to wreck the environment," in *Unless Peace Comes: A Scientific Forecast of New Weapons*, Nigel Calder, Ed. (Viking Press, New York, 1968).

weather modification techniques have been used in Indochina comes from some references in *The Pentagon Papers* which indicate that the Joint Chiefs of Staff (JCS), probably in 1966, had rainfall experiments conducted over Laos "successfully." In 1967, the JCS urged President Lyndon B. Johnson to authorize an operational weather program with the innocuous name of Operation POP EYE as a means of escalating the war. According to the Gravel edition of the papers, volume 4, page 421, the JCS suggested to Johnson in a memo that this might be one way of widening the war with minimal political repercussions at home.†

> 4. LAOS OPERATIONS—Continue as at present plus Operation POP EYE to reduce trafficability along infiltration routes
>
> *Authority/Policy Changes*—Authorization required to implement operational phase of weather modification process previously successfully tested and evaluated in same area.
>
> *Risks/Impact*—Normal military operational risks. Risk of compromise is minimal.

Again, on 21 February 1967, the President was handed a "shopping list" of escalation proposals recommended by the JCS and apparently written by John McNaughton of the Office of International Security Affairs in DOD. Volume 4, page 146, lists among the recommendations:

> 8. Cause interdicting rains in or near Laos.

The narrative text summarizes the rest of the memo:

> The discussion section of the paper dealt with each of the eight specific option areas noting our capability in each instance to inflict heavy damage or complete destruction to the facilities in question.

Evidently, the JCS considered weather modification worthy of consideration as one way of waging war.

Some who have been closely associated with *The Pentagon Papers* study, asked about these references, pointed out that the study was compiled by civilians with relatively little knowledge or data on day-to-day combat operations. They say it is reasonable to infer that the relatively few references to weather modification activities in *The Pentagon Papers* are no clue to the actual extent of military weather modification operations.

The other evidence that rainfall augmentation might still be going on is circumstantial. On 18 March 1971, the well-known syndicated columnist, Jack Anderson, in his column in the Washington *Post*, claimed that the Ho Chi Minh trail, which runs through both Laos and Cambodia, had been seeded by the Air Force since 1967 (the date of the JCS recommendations listed in *The Pentagon Papers*). In part, Anderson wrote:

> The hush-hush project, known by the code name "Intermediary-Compatriot," was started in 1967 to hamper enemy logistics. Those who fly the rainmaking missions believe they have increased the precipitation over the jungle roadways during the wet seasons.
>
> . . . These assertedly have caused flooding conditions along the trails, making them impassable.
>
> The Ho Chi Minh trails will get their next monsoon bath from May to September. . . . Only those with top security clearance knew, until now, that nature would be assisted by the U.S. Air Force.

Anderson was alleging that "Intermediary-Compatriot" would be going on from May to September 1971. The Pentagon has never confirmed or denied the charge. Its response, in fact, has been to say that the answers are classified—a statement that leads some liberal congressmen to conclude they must be doing it. John S. Foster, Di-

† *The Pentagon Papers: The Defense Department History of United States Decisionmaking on Vietnam* (Beacon Press, Boston, Mass.), vol. 4.

New Prizes to Honor Technology

The Office of Science and Technology (OST) has announced the creation of a new kind of prize—called Presidential Prizes for Innovation—which will be roughly approximate to technology what the National Medal of Science is to science.

President Nixon announced the idea in his science and technology message last March. The OST has since been scouting around for nominations, and it plans to make the awards in September.

The awards are designed to honor individuals or teams who have been responsible for developing technological applications of "demonstrable utility and benefit to society" that have emerged in the last 10 or 15 years. The innovation must be in one or more of ten fields: environmental quality, energy, natural resources, health care and safety, food and nutrition, education, housing and community development, transportation, communications and information processing, and productivity and international trade.

An example of the kind of thing they are looking for, says Carl Muehlhause of OST, is the development of xerography, which revolutionized the copying business (xerography would probably not be eligible because, although it has only been in widespread use for the past 15 years, it was developed in the 1930's). Between five and ten awards will be made this year.

Additional prestige in the form of a cash award of around $50,000 is attached to each prize, with the money coming from the technological incentives program of the National Science Foundation. Willis Foster of the Presidential Prizes staff says the prizes are seen as sort of "domestic Nobel prizes," in that they supply "incentive to young scientists" by according "ultimate recognition for an achievement in technological applications."

The new awards, though, are designed to spotlight a particular innovation rather than a particular scientist, and a prize could go to an entire company, if deemed appropriate. Asked if the prize-givers were worried about awarding a private corporation what amounted to a free presidential commercial, Muehlhause said they would try to avoid doing anything that was not "politically savvy."

Final selection of recipients—to be performed by a panel of experts appointed by OST Director Edward David—will be tricky. There will inevitably be some controversial decisions about when an innovation underwent its significant phase of development and who was most responsible for the benefit to mankind. If all goes well, Presidential Prizes for Innovation will become an annual event.—C.H.

rector of Defense Research and Engineering (DR & E), replied in an almost identical fashion to written queries from Senator Claiborne Pell (D–R.I.), Senator Alan Cranston (D–Calif.), and Representative Gilbert Gude (R–Md.).

> Certain aspects of our work in this area [weather modification] are classified. Recognizing that the Congress is concerned . . . I have, at the direction of Secretary Laird seen to it that the Chairmen of the Committees of Congress with primary responsibility for this Department's operations have been completely informed regarding the details of all classified weather modification undertakings by the Department. However, since the information to which I refer has a definite relationship to national security and is classified as a result, I find it necessary to respectfully and regretfully decline to make a public disclosure of the details of these activities at this time.

Pell will try to get some elaboration on this statement from DOD when he holds hearings on a draft treaty banning environmental modifications for military purposes. However, so far, Laird is the only DOD official who has been asked point-blank whether the military is modifying weather in the war. In April, Senator J. William Fulbright (D–Ark.) asked him about it, although the questioning was limited to North Vietnam.

FULBRIGHT: ". . . In other words, you have never engaged in the use of this, whatever it may be, weather control, although you have a capability of it. Is that the reason?"

LAIRD: "We have never engaged in that type of activity over North Vietnam."

Although it sounds harmless, in Indochina, rainfall augmentation can have key military and tactical advantages. The purpose of cloud seeding would be to muddy up the hundreds of trail networks which wind southward and eastward through Laos and Cambodia, providing vital links between North Vietnam and China, and South Vietnam. Impeding the traffic of men and materiel which flows constantly through this jungled, often mountainous terrain has been the key objective of the United States' billion-dollar bombing campaigns since 1965.

But a flood can mess up a road or pathway as much as a bomb explosion can. Moreover, it is much cheaper, and highly covert. Scientists say that only if the Laotians and Cambodians took extensive samples of rainwater and systematically tested them for trace elements, could they actually prove that the normal rainfall had been artificially increased.

Moreover, this form of weather modification is equally covert to the side employing it. According to civilian scientists, a cloud-seeding plane can be any type of plane. It needs little special equipment, and 35 to 100 pounds of silver iodide for a 6-hour seeding mission. Even if equipped with racks for the dropping of pyrotechnic flares—one technique for seeding—a weather modification plane would look the same as a reconnaissance plane which drops similar flares. Not only would the Laotians have a difficult time discovering our cloud-seeding activities, Americans would have difficulty too.‡

One of the most eminent of DOD's weather scientists is Pierre Saint-Amand, who is head of the Earth and Planetary Sciences Division of the Naval Ordnance Laboratory, Naval Weapons Center, China Lake, California. He says that the alleged use of cloud seeding in Indochina is "outside of my ability to answer." Like other DOD spokesmen on the subject of weather modification, Saint-Amand is eager to point out that the Soviet Union is doing extensive weather modification research.

As to the potential of cloud seeding for impeding infiltration routes, Saint-Amand said, "I don't think using weather to discourage people from moving is a bad thing to do. If you estimate the amount of damage done by impeding someone's transportation, versus blowing them up or burning them up, I don't think it is so immoral." In effect, weather is no less humane a weapon than bombing and gunfire.

Civilian meteorologists, however, tend to be far more cautious about the efficacy of current weather modification techniques. They say, anxiously, that in few cases can cloud seeding be actually proved to work. The DOD, for example, claims that a cloud-seeding project over Texas during a drought was successful because heavy rainfall followed the seeding. However, since the rain fell in many areas besides those seeded, there is no way of knowing whether the rainfall would have occurred anyway, and in what amounts.

Civilian weather scientists almost universally favor limiting or banning military operations in which weather modification techniques are used, and they can point to a fairly long history of recommending same. In 1971, a National Academy of Sciences (NAS) study of the future of the atmospheric sciences resolved that: §

> The U.S. Government is urged to present for adoption by the United Nations General Assembly a resolution dedicating all weather modification efforts to peaceful purposes and establishing, preferably within the framework of international nongovernmental scientific organizations, an advisory mechanism for consideration of weather-modification problems of potential international concern before they reach critical levels.

One of the most prominent meteorologists is Thomas F. Malone, of the University of Connecticut, who is chairman of the NAS panel on weather modification of the academy's Committee on Atmospheric Sciences and one organizer with the World Meteorological Organization of the United Nations of the Global Atmospheric Research Program (GARP). Malone says, "I have made speeches for 10 years saying we should get together and do this work internationally before it got to the point of being operational. Otherwise we will face horrendous political problems . . . putting the genie back into the bottle."

Joanne Simpson, who has made cloud modification experiments at the Experimental Meteorological Laboratory of the National Oceanographic and Atmospheric Administration (NOAA), was asked how she would react to seeing the results of her work applied in warfare. She said, "I would be grieved to see my work used for military purposes because I got involved in this kind of work to do useful things, not destructive things."

And Joseph Smagorinsky, a NOAA meteorologist who has modeled climate and weather and who is on the executive committee of the GARP organizing committee, expressed stronger opposition: "These programs are a cooperative effort of many nations, and each gives up a certain amount of autonomy to work together," he said. "If they felt this would be used against them, there would very definitely be a cooling off." Smagorinsky pointed out that one part of the GARP plan will put about 20 ships and 10 to 15 airplanes over the Atlantic working together. They will come from many

‡ The civilian experiments which would parallel this activity are reported in "Seeding Cumulus Clouds in Florida: New 1970 Results" by Joanne Simpson and William L. Woodley (*Science*, 9 April 1971). See also *Science*, 7 May 1971, for a general review of weather modification progress.

§ *The Atmospheric Sciences and Man's Needs: Priorities for the Future*, Recommendation III-6, Committee on Atmospheric Sciences, National Research Council (National Academy of Sciences, Washington, D.C., 1971), p. 61.

countries, including the United States and the Soviet Union. If it turns out that the United States has militaristic uses for weather modification, "this sort of thing would drop dead. It would undo everything that science has been able to do. It would have absolutely tragic effects."

Walter O. Roberts, director of the National Center for Atmospheric Research in Boulder, Colorado, takes a more conservative view. "I think it very unlikely that deliberate weather modification is a particularly effective weapon," he said. "I'm very concerned about international, inadvertent weather modification as a result of pollution; I don't consider meteorological use in warfare as much of a threat. But if you could visit a hurricane on somebody, I would be very opposed and consider it very serious."

Concern over the military aspects of weather modification has been expressed by a number of defense specialists and arms control experts. Many see a parallel with chemical and biological weapons, which have similar inadvertent effects on environment, and also affect both soldier and civilian. Leslie Gelb, now of the Brookings Institution, who directed from within DOD the 47-volume Pentagon study of the war, which was later leaked as the Pentagon Papers, said, "My instinctive reaction to the use of this kind of technique is negative. Like chemical and biological weapons, it deals in an area that would become essentially uncontrollable. But I have no categorical answer on it because I don't know enough of the scientific aspects."

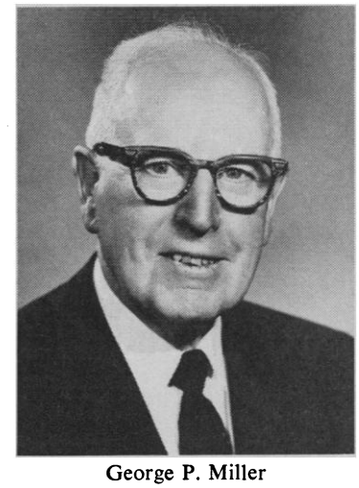
Representative Gude, who, with Cranston, has attempted to find out about Indochina weather control for over a year and has never even been offered a DOD classified briefing, says, "There's a similarity between chemical and biological weapons and weather control. You could have a snowballing effect in both cases, an effect on nature over which you lose control."

Matthew Meselson, professor of biology at Harvard, and a long-time consultant to the Arms Control and Disarmament Agency, who is identified with the successful campaign to ban biological warfare, was asked about the parallel to chemical and biological warfare. He said, "First, I have no knowledge one way or the other as to whether the United States has engaged in weather modification in connection with military activities in southeast Asia.

Space-Science Chairman Defeated

Last week's Democratic primary in California, which brought McGovern to victory, swept others to defeat, including long-time Chairman of the House Science and Astronautics Committee George P. Miller. A member of Congress since 1944, Miller was judged to have a safe seat, but his advancing years—81—seem to have been a decisive factor in Miller's loss to a candidate half his age.

Since 1961, when Miller became chairman of the committee, the Apollo program has reached fruition and starts have been made on Skylab and the shuttle. Miller was NASA's foremost advocate in the House and took pride in announcing every latest achievement of the space program. Although it is the House Appropriations Committee that has real power over NASA's budget, Miller's committee was influential in having NASA expand its investment in areas such as scientific satellites.



George P. Miller

The House committee, unlike the Senate's space committee, also has jurisdiction over science, exercised through its subcommittee on science, research, and development, which Miller set up in 1963. Under its first chairman, Emilio Q. Daddario (D–Conn.), the subcommittee was a cornucopia of thoughtful—though often stillborn—legislation on matters scientific. Miller also created subcommittees paralleling the internal organization of NASA. NASA apart, legislation in which Miller himself has taken a particular interest includes the revision of the charter of the National Science Foundation, which broadened considerably its responsibilities; the bill to establish an Office of Technology Assessment, which recently passed the House; the medal of science awards; and the proposals for converting the United States to the metric system. More recently, Miller has been active in putting together an interagency committee on solar energy.

Not flamboyant by nature, Miller preferred the tête-à-tête to the public platform as a way of doing business. Though equal to the old-style committee chairmen in years, he chose not to follow their autocratic methods in running his committee. One committee member recalls that under Miller's predecessor, Overton Brooks of Louisiana, the junior members rarely got the chance even to ask a question of witnesses appearing before the committee. Miller has encouraged participation and has been generous in setting up subcommittees for junior members and in supporting them in what they did.

Also characteristic of Miller's open style has been the commissioning by his committee of outside studies, an unusual practice for Congress. The committee has contracted with the National Academy of Sciences and the National Academy of Public Administration to perform studies on such issues as technology assessment. Another innovative measure was the appointment of two advisory scientific panels which met annually with the committee and afforded an opportunity for scientists and congressmen to mingle less formally than at a congressional hearing.

Oline E. Teague of Texas, a keen supporter of manned space flights, is next in line to succeed Miller. But if Teague decides to remain chairman of the House Veterans Affairs Committee, Ken Hechler of West Virginia will replace Miller. If the Republicans gain control of the House the new chairman will be Charles A. Mosher of Ohio.—N.W.

"However, it is obvious that weather modification used as a weapon of war has the potential for causing large scale and quite possibly uncontrollable and unpredictable destruction. Furthermore, such destruction might well have a far greater impact on civilians than on combatants. This would be especially true in areas where subsistence agriculture is practiced, in food deficit areas, and in areas subject to flooding."

Leonard S. Rodberg, a fellow of the Institute for Policy Studies who assisted in publishing the Gravel *Pentagon Papers*, said, "I don't think we have a right to experiment on other people. It's a standard issue which in medical terms would be called informed consent. The people in that area [Indochina] are totally dependent on the weather for their livelihoods. If we change the pattern we destroy their ability to exist. We've done it not only with weather modification but with defoliants and herbicides." Rodberg adds, "It's quite clear that many kinds of experimentation have been permitted in Indochina. So long as it's not a large operation that would get a lot of publicity, anything can be done."

Most of those queried favored some sort of ban on military uses of weather modification technology. But Adrian S. Fisher, deputy director of the Arms Control and Disarmament Agency from 1961–1969, now dean of the Georgetown University Law School, says, "Weather modification is really an appropriate subject, not only for an arms control agreement, but for a peaceful uses agreement," which would "regulate allocation of resources in such a way as to recognize its good qualities as well as its bad ones."

Finally, another well-known arms control specialist, Herbert P. Scoville, Jr., favors a ban on weather modification's military uses. "I would strongly support any statement that we ought to ban the use of weather modification for military purposes and seek an international agreement on this.

"At some stage of the game, somebody may start doing it—even if it's not going on now. To me it is a terrible way to be using science."

—DEBORAH SHAPLEY

Accelerators: Big Physics Moves toward Consolidation

It is obvious that the $250 million accelerator at Batavia, Illinois, which on 1 March pushed its first proton beam up to 200 Gev, will dominate America's physics landscape for decades to come, and the world's as well for at least another couple of years until Europe's CERN II goes on the air.

The big investment in the National Accelerator Laboratory (NAL) reflects the government's policy of consolidating resources at a few major installations, often at the cost of shutting down or drastically reducing support of other machines, so the country can sustain a virile and innovative, even if selective, physics research program.

The same trend obtains in medium energy physics, which now has as its centerpiece the new $57 million Los Alamos Meson Physics Facility. LAMPF, an 800-Mev proton linear accelerator, will have an operating budget of about $9.3 million for fiscal 1973 and is scheduled to start operations early next year.

Some reshuffling of priorities has been necessary to boost these big machines into orbit. Back in 1971, the Atomic Energy Commission (AEC) dropped support of the 3-Gev Princeton-Penn Particle Accelerator, which helped free funds for NAL (*Science*, 2 July 1971). The AEC's budget for high energy physics, $116.4 million in fiscal 1972, will be $126.4 million for 1973, with most of the increment going to Batavia. Despite this, the laboratory is getting nothing like the $60 million projected several years ago for new equipment, and the $20 million slated for 1973 is $6 or $7 million short of what is seen as desirable.

Other laboratories are making much bigger sacrifices. Most of the AEC's five remaining high energy accelerators are operating at between 60 and 70 percent of capacity. (The only other high energy machine, the 12-Gev Cornell synchrocyclotron, supported by the National Science Foundation, is also cutting down on services and the use of some facilities.) It has been rumored for some time that new sacrifices will have to be made to feed NAL, which is expected to devour from $60 to $70 million per year by 1975 (this figure includes funds for operation, equipment and accelerator improvements). The principal candidates are the Berkeley Bevatron-Super Hilac, the Argonne National Laboratory's Zero Gradient Synchrotron (ZGS), and the Cambridge Electron Accelerator (CEA), whose operations are now limited to experiments with colliding beams. But AEC officials insist that no further shutdowns are being planned.

The Joint Committee on Atomic Energy last year asked the AEC to make a priority listing of which of its high energy machines should be kept open if there were not enough money to go around. This request, considering the favorably disposed nature of the committee, was taken as an invitation to make a strong case for all of them (*Science*, 3 September 1971). The report, "Considerations for a Viable and Productive High Energy Physics Program," was released last January. Priorities were, not surprisingly: (i) NAL; (ii) SLAC and the Alternating Gradient Synchrotron (AGS) at Brookhaven National Laboratory; (iii) Berkeley Bevatron and ZGS; and (iv) CEA. SLAC and the AGS are accepted as indispensable. Bevatron and ZGS, it was pointed out, cannot be compared to each other because Bevatron is cheaper to run, has just been tooled up for heavy ion experiments, and has a superb staff at Lawrence Berkeley Laboratory, while Argonne has twice the energy (12.5 Gev) and a new hydrogen bubble chamber, and its data are relied on by a large portion of university user groups.

The AEC report repeatedly points up the need to halt current "erosion" in manpower, which has decreased by 20 percent in the last 3 years, despite