had some people whom we weren't sure whether they were alive or dead," he said, "so we assumed they were alive." He explained the shifting size of the cohort, which at different times numbered 3070, 3201, and 3055, was because NIOSH was trying to square its information with that offered by Mancuso in his study, which included some Reading workers. Industry's position on the Mancuso study is that it should be stricken from the record, since the paper seems not to mention smoking at all, and since Mancuso has said he would give his backup data to the industry but has failed to do so.

Interestingly, the authors of the Bayliss study differ on how strong a case their paper makes. Bayliss told *Science*, "I thought there was a pretty, reasonably strong case, but of course that's a judgmental matter." Wagoner, in a separate interview, maintained that the evidence was all "converging" and the case "irrefutable." Infante said: "The results and the interpretation don't change. We had to keep stating, defining, who the cohort was . . . We know what the meal is, but we have to go out and buy the meat and vegetables."

The hearing ended in September, but the administrative judge before whom it was held, has allowed until mid-December for posthearing submissions. On the NIOSH side, these include a fourth Bayliss paper. Industry will submit the most comprehensive rebuttal yet to the Bayliss and Mancuso studies.

Warfare Continues

But the warfare continues. Brush's vice president, Powers, questions whether the hearing record will make any difference, since Wagoner, one of the most ardent supporters of a new beryllium standard, recently moved to OSHA to be Eula Bingham's special assistant. Industry believes that Wagoner should not participate in Bingham's decision-making on beryllium, and is seeking a written reply from Bingham on Wagoner's role.

Brian MacMahon, professor of epidemiology at Harvard, has gone over the latest cohort tape which has 3055 workers and 47 lung cancer deaths. The added lung cancer death is that of a man who was hired and terminated on the same day. *Science* asked Wagoner whether he knew of the man's brief employment. "I guess we didn't have that information" he replied.

So the parties to the controversy seem locked in an epidemiological treadmill, with NIOSH blaming the problems in its cohort data on industry, and industry blaming the "slanted" data on NIOSH.

In the long run, the controversy's importance lies not so much in whatever the beryllium industry ultimately knuckles under to a new tighter, standard. It is more important as a precedent, for beryllium is among the first of many alleged carcinogens on which OSHA's Bingham will have to rule.

These decisions will have their political element; that is, Bingham will want to not only protect American workers but to give the appearance of protecting American workers. But she will also have to judge whether the scientific evidence in each case ultimately supports or erodes those political decisions.

—DEBORAH SHAPLEY

National Laboratories: Focused Goals and Field Work Hinted Under DOE

Even before the federal energy agency underwent two face-liftings, people were saying that the national laboratories were declining in importance and were in need of new missions. Their old roles—as practitioners of basic research, nuclear reactor development and weapons design—proved to be embarrassingly narrow when the Energy Research and Development Administration (ERDA) inherited the labs from the Atomic Energy Commission in 1975. Although ERDA expanded the breadth of energy research at many of the individual laboratories, it never quite determined what should be the laboratories' role in the national energy program.

In the 2 months since the Department of Energy inherited all of ERDA's former programs, officials of the new energy agency have been crisscrossing the airways to inspect some of their 25 laboratories and research centers. The new undersecretary of the department has visited three laboratories in the west, Sandia, Los Alamos, and Livermore. The man who had primary responsibility for getting the new department running, Tom Reed, has visited a number of east coast labs. The major laboratory directors have also met with the undersecretary as a group. The message in these meetings has been that no abrupt changes will occur, but the past roles of the labs are being analyzed carefully and their future roles may gradually change.

Soundings taken in Washington when the energy department was inaugurated in early fall raised a number of problems. The laboratories had accumulated a multitude of new programs to spearhead ERDA's acceleration of energy research. Some critics said that the labs spend too much money on projects that are not put up for bids and that their expenditures would be more productive if brought under zero-based budgeting. The various laboratories have enjoyed considerable autonomy during most of their history.

On paper there are reasons for the laboratories to worry about losing their independence. The reorganization that accompanied the formation of the energy department created two new vehicles for monitoring the work of the various laboratories at the highest levels of the agency. For their institutional needs, the laboratories will no longer report to regional operations offices but will report to an administrator at the rank of assistant secretary in the department. In addition, the laboratories will be regularly scrutinized by a newly created council composed of all the line administrators of the department. The council will be chaired by the same man who has responsibility for day-to-day coordination of all the department's energy research activities, Undersecretary Dale D. Meyers, and that may be an indication of how closely the laboratories' efforts will eventually be interwoven into the whole research and development fabric.

Whatever develops in the new department's relations with the field, the possibility that the changes pose a threat to the traditional independence of the laboratories is taken seriously in some quarters. Two weeks ago the House Science and Technology Committee called in the directors of eight major labs to testify in a hastily arranged hearing that had no apparent routine purpose. Some observers thought that the committee, which has

often sided with program and field personnel against the Washington office, was preparing a solid record of accomplishment in case the labs were threatened in the future.

The first change in the wind is that the roles of the laboratories in developing nuclear, fossil, solar and geothermal energy technologies are likely to be made more specific. Many laboratories, including the weapons laboratories, ventured into a variety of areas under ERDA, but that diversity may change. "We don't want to be so firm as to name lead labs for each energy technology," said Meyers in an interview with *Science*, "but we will probably move more in that direction." Meyers, who came to the department from the presidency of North American Aviation (*Science*, 16 September), is making many of the decisions about the shape of the new department and is a pivotal figure in deciding the role of the laboratories.

Beyond the question of what work should be done where, there looms the larger question of what role the labs should have in implementing an energy research program. Should they be groomed as centers of excellence in par-

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Humanists on the Move

Two Princeton historians have hatched an idea for a AAAS-type organization devoted to the humanities—to be called, appropriately enough, the American Association for the Advancement of the Humanities.

The AAAH has just been incorporated in Washington, D.C. As yet it has no office, members, or money—just three board members: James Banner and Theodore K. Rabb, of Princeton, and John W. Shumaker, dean of humanities and fine arts of the State University of New York at Albany.

Banner explains that the humanists—and by that term he means those engaged in the humanistic side of all branches of endeavor, including science—have been sitting out public policy debates for too long. "They have played no major role, for example, in the national debate over recombinant DNA research. They have offered no specially informed testimony before congressional committees investigating privacy, human rights, nuclear weaponry, or environmental protection."

In leaping into the public policy arena, the AAAH is expected to perform a function that various learned societies either cannot or do not want to do, says Banner. "We're going to have to adopt a mode of behavior that is going to be alien to most humanists."

Long-term plans include conferences, political internships for humanists, and general advice-giving. What the group wants to do as soon as possible is start a publication called the Washington Humanities Report. This, says Banner, will be "an information and analysis sheet" that reports on public policy matters "in a rather combative and hard-bitten style"—a sort of hard-boiled News and Comment for humanists. He says the controversy over the appointment of Joseph Duffy to the chairmanship of the National Endowment for the Humanities is a recent example of a story that was inadequately covered by existing publications.

Banner says everyone he and his colleagues have approached about forming the new organization think it is a fine idea, including AAAS executive director William Carey, who was reportedly "very helpful and enthusiastic."

Battle Heats Up over Sugared Cereals

Threatened by the possibility of imminent restrictions on television advertising of junk food for children, the Kellogg Company staged a media blitz on 15 November to extol the virtues of sugar-coated cold cereals.

Their ad, which covered two full newspaper pages in metropolitan dailies around the country, is evidence of the fact that breakfast cereals have become the major battleground between nutrition activists and food manufacturers. Many so-called "ready-sweetened" cereals have sugar as their main ingredient. Consumer activists have made them a major target for several reasons: the prime consumers are children, whose lifetime eating habits are in the process of being formed; breakfast cereal is a vitamin-enriched dietary staple, unlike snacks that lay no claim to nutritional merit; sugared cereals are often eaten as snacks without milk, which makes the sugar more likely to stick to the teeth; and sweetened cereals are overpriced as well as oversugared. And they are hawked unremittingly: one study showed that presweetened cereals are advertised five times as often as nonsweetened cereals on television programs for children.

Cereal producers, instead of backing away gracefully from this product, have become increasingly aggressive in its defense. Their general line of reasoning, a nugatory one in the eyes of nutritionists, is that the only way to get kiddies to pack in enough nutrition is to sugar-coat everything.

The issue now seems to be coming to a head. Last spring two organizations, the Boston-based Action for Children's Television (ACT) and the Center for Science in the Public Interest (CSPI), petitioned the Federal Trade Commission (FTC) to ban the advertising on children's television programs of all sugar products typically eaten between meals. The cereal people were scheduled to make their case before the FTC on 22 November, and the FTC is expected to announce a decision before the end of the year. Short of a ban, the agency could take any number of actions such as restricting advertising time for the products or requiring sugar warnings in the commercials.

An FTC nutritionist told *Science* that the advertising campaign appears to be a last-ditch attempt to rally public opinion to the ready-sweetened cause. The ad has a slightly desperate quality, including as it does charts, graphs, footnotes, and a bewildering diagram intended to show there is not much difference between the sugar molecules in cereal and those in fresh fruit.

Also, according to Michael Jacobson of CSPI, it contains some misleading information. It uses "ready-sweetened" in a fashion that makes it appear to be interchangeable with "ready-to-eat" (RTE), although RTE includes all cold cereals. It says "ready-to-eat cereal eaters skip breakfast less than non-ready-to-eat cereal eaters." This, in Jacobson's view, is a tautology which means "people who eat breakfast eat breakfast more often than those who don't."

The ad also cites studies showing that

ticular research areas, a role similar to their past nuclear efforts, or should they be serving as technical managers advising Washington and coordinating efforts between the program managers and outside contractors. This philosophical issue is as yet unresolved, says Meyers, who came to the job from an aerospace background and says candidly that he has a lot to learn yet about energy programs. "On the issue of inside versus outside work at the labs, we've been trying to understand the capabilities—for centers of excellence, for capability to manage. It varies greatly from lab to lab and operation to operation." According to another Washington official familiar with the question, the large ERDA labs did well as centers of excellence but not so well as program managers. The more specialized labs, such as the energy centers, were also called upon by ERDA for program management support.

Spending about $2 billion of the department's $10.4 billion budget, the laboratories will be a large part of the Carter Administration's energy effort. The entire R & D program is intended to be geared much more closely to the economic considerations of the energy mar-

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cereal consumption does not increase tooth decay in children, although these studies have been criticized by other researchers as being too poorly designed to separate out the role of cereals from that of the rest of youthful diets.

The ad further claims that RTE cereals account for only 2 percent of sugar consumption. But this statistic, says Jacobson, does not reflect the fact that the percentage would be much higher if it only related to children.

Despite the rising agitation among parents and nutritionists, cereal companies are finding new ways to mine a market whose potential apparently remains to be fully exploited. The latest entry into the presweetened field comes to us from Ralston Purina—called Cookie Crisp, the cereal is 45 percent sugar, comes in chocolate chip or vanilla, and looks like tiny cookies.

A New Attempt to Help the Deinstitutionalized

There are between 1.5 and 2 million mentally disabled people in this country who are not sick enough to be institutionalized and not well enough to take care of themselves without help. Many are in hospitals and nursing homes; the majority are scattered around in such places as welfare hotels, living in a shadow world, socially isolated, ill fed, ill housed, jobless, and confused. They are the "walking wounded of the mind," says Bertram Brown, director of the National Institute of Mental Health (NIMH)—the products of the vast and continuing movement toward deinstitutionalization of mental patients.

The plight of the deinstitutionalized is a major issue in mental health care. Now the government has announced the beginnings of a program, called Community Support Systems (CSP), to take the walking wounded under its wing by helping them individually to take advantage of available services in such areas as housing, health, employment, and rehabilitation.

To do this, $3.5 million worth of CSP contracts (the money was originally slated for upgrading of mental hospitals) have been awarded to mental health agencies in 16 states. The states will then subcontract to what is being called a "core service agency"—this can be a community mental health center or other service agency. The designated agencies will have responsibility for coordinating all local resources of potential help to the mentally handicapped. Within each core agency case managers will be assigned to keep in continuous contact with mentally handicapped individuals.

The program does not create new services but is an attempt to get people plugged into ones already available. It will also be very manpower-intensive—an NIMH official told *Science* that if the demonstration programs are effective, they may lead to a "whole new profession" of case manager.

Judith Turner of NIMH said at a press conference that the task of coordinating government services will be enormously complex, but that it can be done—they do it in southwest Denver, anyway, where there are comprehensive community services for deinstitutionalized people. For many people, though, the only systematic follow-up available is monthly visits to some clinic for medication.

Next year will see only a small increase in CSP funding. However, if Rosalynn Carter's mental health commission snaps up the idea and incorporates it in its final recommendations next April, the program could bloom.

Russell Peterson Says Yes—He Will Head OTA

Everyone at the Office of Technology Assessment is reportedly heaving vast sighs of relief at the news that Russell Peterson has consented to become the OTA's new director. He'll start work on 16 January.

Although Peterson was not the OTA board's first choice, he appears to possess the Renaissance-type qualities all were seeking: a background in science, management, and government; breadth of vision; and a prestigious reputation.

Peterson, who has spent 2 years setting up the global lobby New Directions, says he is "very excited" about his new job. "I think there's a great need to get more people in critical decision-making positions to face up to the longer term and more holistic aspects of the impact of our decisions. Most people spend too much time on the urgent and too little on the important. Everyone focuses on the near term. We need more attention to long-term considerations."

Peterson believes it's a logical move from New Directions to OTA since "critical technical issues are world problems." He is expected to exert rather more decisive leadership than did Emilio Daddario, OTA's first director, who resigned last summer. Daddario's authority was partially undermined by the fact that all his staff were formally hired by the chairman of the OTA congressional board. Peterson sought and received assurances from the board that he would have authority over hiring and firing.

OTA has been floundering around for many months; now, says one staffer, everyone is optimistic that Peterson will bring the "breadth of imagination and strength of leadership that has been so desperately lacking."

—Constance Holden

ket. Getting a new energy source into place at the right time will require a great deal of feedback, and Meyers sees a role for the national laboratories in this function, even though they have had little experience with product development or field engineering in the past. "DOE will feel a much stronger responsibility to respond to people in the field," says Meyers, "and rather than set up new technical organizations the labs will have to help support these people." How much expertise at commercialization the labs should build up is "a question of degree," but "we can't make it in a vacuum—no good product can make it unless there is feedback in the system."

One area in which technology is moving quickly from invention to production is in solar energy—an area in which field contact will be especially important. Meyers said he expects that the newly formed Solar Energy Research Institute (SERI), which just began operating in July, will have some commercialization responsibilities, including applied engineering and product improvement. Other labs that have done solar research, such as Sandia, would also be expected to give field support for new solar concepts.

The assignments of the laboratories in the new organization have been intended to coordinate work as much as possible. In most cases the administrator with primary responsibility for a program (fossil energy, for instance) will also be the link for laboratories working in that area. Thus, weapons labs report to the assistant secretary for defense, basic research labs report to the head of the Office of Energy Research, and specialized energy research labs report to the assistant secretary for energy technology. The five energy research centers that were set up along with the coal research programs of the Interior Department will report to the powerful assistant secretary for energy technology, who has responsibility for all energy research up to the stage of commercialization. Nine laboratories that are almost entirely devoted to nuclear work will also report to the assistant secretary for energy technology, the post for which Robert Thorne has been nominated (*Science*, 7 October) though his nomination has been held up for several weeks in the Senate pending an investigation of his activities in the San Francisco ERDA office at the time of the California nuclear initiative.

The nine centers for fission (and fusion) development are the Bettis lab run by Westinghouse in Pittsburgh, the Knolls lab run by General Electric in Schenectady, the Idaho and Hanford, Washington, reactor engineering laboratories, the Liquid Metal Engineering center for testing breeder coolants in Santa Susanna, California, the New Brunswick Laboratory, the Princeton fusion laboratory, the Savannah River Lab supporting tritium and plutonium production, and the Shippingport Station near Pittsburgh where Admiral Rickover is currently testing a light water breeder reactor.

Dale D. Meyers

The laboratories that predominantly do basic research will report to the director of the Office of Energy Research, who is MIT chemist, John Deutch. He will have purview over the Brookhaven, Fermi, and Stanford labs, each of which has large high-energy accelerator programs, in addition to the Lawrence Berkeley Laboratory. He will also look over the Bates, Ames, and Notre Dame laboratories.

The three weapons laboratories will continue to report to the assistant secretary with jurisdiction over all weapons activities of the energy agency. Just as before, the energy department has full responsibility for developing, testing, and producing nuclear warheads for defense purposes, but about 55 percent of the work at Los Alamos and 50 percent of the work at Livermore is now non-weapons energy research.

Four laboratories were sufficiently multipurpose or new that they did not fit easily into energy technology, defense or research categories. Those have been retained by the undersecretary himself. They are the Argonne and Oak Ridge National Laboratories, which are the largest non-weapons laboratories under the department, plus the Pacific Northwest Lab operated by Batelle, and the Solar Energy Research Institute. The issue of where these labs should report is scheduled to be resolved. According to Meyers, they may or may not stay under him.

What the Washington connections will mean for the individual labs is not at all clear yet. One observer in the DOE organization said that so far all it means is that each lab has a "Godfather" it didn't have before. The mechanics of money flow and technical coordination will go on as before—the contracts are held by the regional operations offices and the technical guidance comes from the program offices. The meaning should become clearer after the first meeting of the DOE Field and Laboratory Coordination Council on 30 November.

The laboratories have gone through a rapid and not entirely placid evolution in recent years. At the demise of the Atomic Energy Commission, most of them were essentially single-purpose enterprises that were ill-equipped to go into many new areas. The transition to new energy technologies has been forced and painful, according to one DOE official. He predicts that the transition from ERDA to DOE will not prove so traumatic as the earlier change in venue. Rather than major changes in the roles of the national labs, he predicts there will mainly be changes in administrative procedures. Many labs have grown so fast recently that researchers work in trailers rather than permanent buildings, and administrative problems such as finding computer money have gotten particularly sticky for some of the labs.

The Department of Energy is running far behind schedule in getting organized. It will be at least another month before the organizational structure is complete at the program level, and "probably six months before we really have the players in place and the missions and definitions fixed," predicts Meyers. In such a situation it is not surprising that a little uncertainty should linger. One factor on which almost all parties agree is that the labs will probably not grow much larger. The level for fiscal 1978 is about the size at which the labs should stabilize (60,000 employees), according to Meyers. The spurt of energy research money that has moved through the labs in the last few years has had both auspicious and inauspicious effects, and a number of laboratory directors are beginning to realize it. All of the labs, according to one observer, are beginning to question whether there will be funds there when the energy wave has passed. This new note of caution is welcome news to many university researchers who have felt somewhat unfairly shut out of energy research action during the boom period of the 1970's.

—WILLIAM D. METZ