

himself a psychiatrist and well known in the field (*Science*, 26 August), is regarded as tough and aggressive and as a man who would be uncomfortable with the directorship of NIMH occupied by Brown, who has not only dug in deeply at NIMH and on Capitol Hill but also has been highly influential in the national mental health network.

Brown's case is unusual. He was exceptionally young—under 40—when he was appointed to the NIMH job. A directorship would cap the career of many a health administrator, but for Brown there is the problem for what to do for an encore. And Brown is a PHS regular officer who signed up to spend a minimum of 20 years and now has 17½ years of service. That means he has 2½ years to go before he can qualify for pensions and other benefits and move out of government as many of his colleagues have done. Reassigning Brown has presented HEW with an awkward problem. Brown has been named a special assistant with still unspecified duties to Julius B. Richmond, assistant secretary for health.

Brown has been told he would have until early spring to wind up at NIMH, but after the press report that he was resisting the firing the word came to clean out his desk and vacate his big corner office; he is now somewhat in limbo.

Brown's dismissal is being interpreted by some as a sample of Califano's hardball management style. When he took the job he made no bones about his intention to master the bureaucratic behemoth of HEW. His vigor has prompted Washington jokes such as that about an "imperial secretaryship." The fact that Brown seems to have been anything but out of favor at the White House doesn't appear to have helped. In fact, it was reportedly a White House contact who told Brown that his firing was imminent and said that the White House had not been consulted and didn't approve. This is not to suggest that the President is offended. Carter said at the beginning of his Administration that he wanted his Cabinet officers to run their departments. Califano is certainly doing that and is said to continue on good terms with Carter.

There is no real sign of a backlash from the Brown firing. The typical reaction in the mental health community is to say that Brown did a great job and express the hope that a capable successor will be found—the search for one has just been launched. Califano's policy on turnover of administrators seems to be the major question produced by the incident.

It seems reasonable to question whether federal managers should expect tenure in top jobs. Given human nature and the civil service system, excessive insulation of the status quo in the upper echelons has a sedative effect on individuals and agencies. Because of the Carter penchant for government reorganization, bureaucrats are perhaps extra sensitive these days, despite the President's reassurances that there will be no downgradings or firings. But Califano's formula of several careers for upper echelon federal executives seems to have shaken up a fair number of people outside of government as well as inside.

—JOHN WALSH

India Bans Monkey Export: U.S. May Have Breached Accord

Safety testing of polio vaccine and several kinds of biomedical research in the United States and other countries may be seriously impeded by a recent decision of the government of India to ban further export of rhesus monkeys after April this year.

Reasons for the edict are still unclear but one factor may have been reports in the Indian press that the monkeys have been used for weapons-related research conducted by the U.S. Defense Nuclear Agency.

The use of the monkeys could contravene the letter, not to say the spirit, of a 1955 agreement between India and the United States. The Armed Forces Radiobiology Research Institute, a branch of the Defense Nuclear Agency, uses about 50 rhesus monkeys a year in weapons-related radiation experiments, according to the institute's research program coordinator E. T. Still. Yet the agreement states that "because of the Indian gov-

ernment's opposition to the use of Indian rhesus monkeys in military experiments, they will not be used in atomic blast experiments or for space research."

Health authorities are so concerned about the embargo that they asked the White House if President Carter could seek reversal of the Indian decision during his recent visit to Delhi. It is not yet known if Carter raised the issue.

Without some new supply of monkeys, the Indian embargo "could very seriously affect our vaccine program," says James H. Vickers of the Bureau of Biologics. The bureau has been planning to breed its own monkeys but will not be able to fulfill its needs from its own production for another 2 years. An available alternative species, the long-tailed macaque, is not as good as the rhesus for safety testing, Vickers says. Defense scientists will also have difficulty in switching to another species and their experiments, according to Defense Nuclear

Agency director R. R. Munroe, are "vital to our national security."

India, which now supplies about 12,000 of the animals a year to the United States, is the principal commercial source of wild rhesus monkeys. Indian sensitivities to the export trade have always been extremely delicate. The monkey is a sacred animal to many Indians—the monkey god Hanuman is a member of the Hindu pantheon. An earlier embargo on rhesus export was imposed in the 1950's for a mixture of religious and political reasons.

The new embargo, announced on 2 December, seems to have been triggered at least in part by a Berkeley based animal rights group known as the International Primate Protection League. Recent press articles about the neutron bomb described certain radiation tests conducted with rhesus monkeys by the Armed Forces Radiobiology Research Institute in Bethesda, Maryland. League co-chairwoman Shirley McGreal brought the experiments to the attention of the Indian press. The *Times of India*, in an article of 4 November, quoted her as saying, "I am appealing to [Prime Minister] Mr. Morarji Desai and the new government of India either to ban the export of Rhesus monkeys to the United States or to insist on strict enforcement by the U.S. of India's conditions of export."

Desai, a strict Hindu and vegetarian, is believed to have been personally involved in the embargo decision which followed a few weeks later.

Other factors may have contributed to the decision, such as an Indian government rhesus task force which has been assessing the monkeys' population status.

How did the U.S. government find itself in the position of trampling upon the Indians' known sensitivities about the issue? Under the 1955 agreement, which is still in force, the U.S. Surgeon General himself signs a "certificate of need" for each order of rhesus monkeys in which he "certifies . . . to the Government of India . . . that these Rhesus Monkeys shall be used only for medical research or the production of antipoliomyelitis vaccine. . . ." Researchers' requests are reviewed by the Division of Research Resources in the National Institutes of Health and forwarded to the Surgeon General for signature.

In the 22 years that the agreement has been in effect, the stricture against military use of the animals seems by one means or another to have gradually faded from view. There seems little doubt that the experiments conducted by the Armed Forces Radiobiology Research Institute were at least in questionable compliance with the agreement because the NIH, as soon as it heard of the *Times of India* article about the AFRRI studies, asked the institute to desist.

AFRRI director D. W. McIndoe says the institute has readily agreed to halt its experiments until the question of compliance is resolved. McIndoe says that he and his predecessors as director believed they were in compliance because the agreement refers to atomic blasts whereas the AFRRI monkeys were exposed only to radiation designed to simulate the effects of atomic blasts.

Monkeys Blasted with 10,000 Rads

AFRRI officials say that much of their work with monkeys is relevant to civilian radiation exposure and medical treatments. But they concede that many of their experiments are weapons related. In a typical experiment, monkeys will be trained in some task, and the change in their performance studied after exposure to giant pulses of radiation such as occur in nuclear explosions. The pulses tested range up to 10,000 rads and may consist of mixed gamma-neutron radiation.

The provenance and conditions of use of the AFRRI rhesus monkeys are still unclear. The animals' country of origin is presumably India, which is by far the



Photo by Henry Spira

Experimental monkey at Armed Forces Radiobiology Research Institute.

main source of supply. According to Charles McPherson, the NIH official who administers the Indian rhesus monkey certification program, AFRRI used to import its monkeys directly from India, but a year or two ago started buying them through the Walter Reed Army Institute of Research. AFRRI research coordinator Still, however, says "We have always bought our monkeys from suppliers in country; we never imported direct."

A clause in the U.S.-India agreement states that certificates are not required if the monkeys are already in the country. At least some of the AFRRI monkeys may have been bought after use by other laboratories, in which case certificates would not be necessary. McPherson, however, says that in his opinion any such second use of Indian rhesus monkeys should fall within the spirit of the agreement and should not include military use.

Neither McPherson nor AFRRI officials seem to know whether any certificates of need were ever signed by the Surgeon General for direct use of rhesus monkeys by AFRRI.

Even if AFRRI's entire use of rhesus monkeys fell within the letter of the 1955 agreement, as AFRRI director McIndoe believes, and as may well turn out to be the case, it seems that no attempt was made by U.S. officials to ascertain if the Indians shared their interpretation.

Overall responsibility for ensuring the national supply of rhesus monkeys rests with a group known as the Interagency Primate Steering Committee. Committee chairman Joe Held of NIH says he un-

derstands that the AFRRI experiments "played a major role in the current embargo" and that "If I had been aware that the Department of Defense was doing anything to jeopardize our supply I would have contacted our DOD representative on the committee and asked him to provide an explanation."

The DOD representative on the committee is Francis Cadigan, director of medical research at the Army Medical R & D Command. Cadigan says it was not the committee's function to inquire into the uses the monkeys were put to, and that in any case he had no knowledge of the AFRRI experiments.

The sole purpose of the certification program instituted by the 1955 U.S.-India agreement was to satisfy the explicitly stated opposition of the Indian government "to the use of Indian rhesus monkeys in military experiments." Responsible officials both at AFRRI and the Walter Reed Army Institute of Research have said they have no personal knowledge of the 1955 agreement. From such remarks, and the general uncertainty about the status of the AFRRI monkeys, it seems that the purpose of the certification program was gradually lost sight of, although the paperwork, in genuine bureaucratic tradition, continued to go forward. The outcome, to the extent that the AFRRI experiments may have influenced the Indian decision, is that not only AFRRI but polio vaccine testers and researchers both in the United States and other countries are now faced with an abrupt drying up of the world's chief source of rhesus monkeys.

—NICHOLAS WADE