

A REPORTER AT LARGE

THE RAID AT SILVER SPRING

Edward Taub claimed that he was conducting legitimate primate experiments in ground-breaking neurological studies, but activists charged that he was needlessly torturing monkeys. Their unprecedented legal battle gave rise to the American animal-rights movement, and called into question the motives of the people on both sides of the issue.

BY CAROLINE FRASER

Their names were Chester, Adidas, Sisyphus, Haydn, Montaigne, Domitian, Big Boy, Augustus, Titus, Nero, Charlie, Hard Times, Brooks, Billy, Paul, Allen and Sarah. They were monkeys. Over a decade ago an animal researcher performed an experiment in some of them crippling their arms. The monkeys lived in one room in a cinder-block building in Silver Spring, Maryland – a building that the researcher called the Behavioural Biology Center. In October, 1981, he was charged with seventeen counts of animal cruelty and became the only researcher ever tried and convicted on that charge in this country. Twelve of the seventeen Silver Spring monkeys are now dead. But they are arguably the most famous experimental animals in the history of science.

A few chimps were launched into orbit during the race into space and thousands of rhesus monkeys were sacrificed in the search for the polio vaccine. But none of the millions of animals – mice, rats, dogs, cats, rabbits, fish, and fowl – experimented on since the dawn of modern research have leaped into the public consciousness quite as the Silver Spring monkeys have. Millions of Americans have seen the monkey's faces on posters and pamphlets, and on the evening news. To hundreds of thousands more, the monkeys became individuals with names and personalities, political prisoners to be sprung from their laboratory jail. They became famous not for what they did for us – not for any data or cure or vaccine they provided- but for what was done to them.

Except for Sarah, who is a female rhesus macaque, all the monkeys were male crab-eating macaques. These are small brown monkeys with a mask of white skin around their eyes. Crab-eating macaques are native to the Philippines, Mauritius, and Indonesia; they live near rivers and snatch shellfish from shallow water. Like most other nonhuman primates, these macaques live in colonies and are intensely social; there are strong bonds between mothers and offspring. Local trappers who hunt the monkeys – they get the equivalent of two or three dollars per animal in the

marketplace – generally look for a mother and young, shoot the mother, and capture the infant as it clings to her body.

The Silver Spring monkeys were caught in jungles. Edward Taub, the man who experimented on them, bought them, for two hundred dollars each, from a dealer over a period of about a year during the late seventies.

Edward Taub is now a professor in the Department of Psychology of the University of Alabama at Birmingham. Since the day the police entered his Maryland laboratory, he has been demonized in the literature of animal-rights groups as a torturer of the animals he had in his care. He has been compared to the Nazi doctor Josef Mengele. When you meet him, he does not live up to the rather lurid picture that has been painted of him. He is a small man, trim and dapper; he walks with a cocky confidence; and he has a strong Brooklyn accent. Although his conviction on the charge of animal cruelty was ultimately overturned, he has never been granted the opportunity or the funding to perform research on animals since. Taub has adamantly denied any wrong doing in his treatment of his animals, and scientific societies have exonerated him, but the journals that once published him now reject his work, and the institutions that once gave him grants turn down his applications. Taub has spent thousands of hours defending himself, but photographs of his laboratory speak far more eloquently than he does. They show animals living in filth and pain and neglect. Taub was born in New York City, in 1931. He graduated from Brooklyn College in 1953 with a degree in psychology and was accepted into the doctoral program of the Columbia Psychology Department. In 1957, he took a job as a research assistant at a laboratory at the Jewish Chronic Disease Hospital (now Kingsbrook Jewish Medical Center), in Brooklyn. He would be working with monkeys, and the experience would prove to be both the making and the unmaking of his career: it introduced him to the type of work for which he was ultimately arrested. The experiment involved a surgical procedure called somatosensory deafferentation.

Deafferentation, which is the cutting of sensory nerves, was pioneered nearly a hundred years ago by the British scientist Sir Charles Sherrington, who won the Nobel Prize in Physiology of Medicine for this work in 1932. Sherrington demonstrated which nerves connected to the spinal cord control which of the body's reflexes. He spent years mapping the nerve system of the spine by cutting different dorsal roots in what he called his "spinal monkeys" and seeing which areas of the body were affected. His theory, which remained a part of the dogma of neurology into the nineteen-fifties, held that the sensory nerves and the motor nerves were an integrated system; if either part was damaged, movement would be impossible.

Over the next year, at Brooklyn lab, Taub studied how and why the loss of sensation affected the motor function of the monkeys' deafferented arms. And in 1958 he discovered something interesting. "It took me a month to see it", he says. "It was just about the most unexpected thing you could imagine. The monkey began using the

originally deafferented limb. He was supporting his weight on it, using it to take a couple of steps. Eventually, after several month's training, he could pick up a peanut with that hand and take it to his mouth." Taub's laboratory partners were thrilled by this development, but his professors at Columbia were far less enthusiastic. It turned out that Taub's interpretation of his discovery directly contradicted the favourite theory of one of the prominent behaviorists in the Psychology Department. Taub and his fellow-researchers claimed that their monkey's capacity to move a limb that had no sensation meant that sensory feedback was not essential to movement. "By this time, I was co-principal investigator on two grants," Taub says. "I was just a grad student, but I had more money than any faculty member. I didn't hide it, either." The situation came to a head a few years later, at Taub's defense of his doctoral-dissertation proposal. "The defense was public, but no one ever came to it except for your committee," Taub recalls. "For my defense, everybody showed up; graduate students, faculty – everybody. And the professor whose theory I had tested – and had shown to be wrong – was very angry. We had a public debate on the relevance of my research to his theory, and he walked out."

Shortly afterward, Taub found that he had flunked a course required for his doctoral degree. He hadn't taken the final exam, and had expected to receive a grade of incomplete until he could do so. Instead, the professor failed him, and the behaviourist he had contradicted took the occasion to tell him he had failed because of his "insolence." Tab, who is telling me this story at a sidewalk café near the Birmingham campus, says, "I was known as an abrasive person with no respect for authority." He tells me later that he became much more easygoing after taking up Transcendental Meditation in the early seventies: "I don't get angry at my students or at people who criticize me. After meditating for years, you'll find that's a fairly common result." Yet, whenever I bring up any of the charges against him, he becomes angry and agitated. Over and over again, Taub tells me that he has never considered himself to be wrong, and his response to questions suggests that he considers it unbearable that anyone else should.

Columbia gave Taub his master's degree in 1959, and in 1962 he transferred to New York University. After completing his doctoral work there, seven years later, Taub was offered a position at the Institute for Behavioral Research, a non-profit, independent research facility in Silver Spring, and moved there with his wife, Mildred, a professional opera singer, in the fall of 1969. The institute, referred to as I.B.R., was founded in 1960 to provide a center for behavioural scientists at a time when that specialization was particularly fashionable. B.F. Skinner was one of its trustees. I.B.R. was four miles east of the sprawling campus of the National Institutes of Health, the government body devoted to medical research. With funding from the N.I.H. and other government agencies, Taub was able to set up a laboratory of his own as a branch of I.B.R. He rented the ground floor of a two-story warehouse

building two blocks from I.B.R.'s headquarters and named it the Behavioral Biology Center.

Taub planned to conduct both human biofeedback experiments and animal experiments at I.B.R. His animal experiments were designed to explore the function of what neurologists call the somatosensory apparatus: sensation in relation to the body's muscles, joints, and skin. He wanted to investigate the role that sensation played in the development of various movements and postures such as walking, grasping, and standing. He decided to carry out deafferentation early and later in the life of some of his animals to see what movements could or could not be performed. Eventually, this meant deafferenting animals in utero-removing a living monkey fetus from the womb, exposing and cutting sensory nerves at its spinal cord, and then returning it to the womb – in an attempt to find out whether certain behavioural movements or postures of monkeys were “hard-wired” into the brain or required reflexes and sensory feedback for their development. The results of Taub's fetal-surgery experiments were discussed in a 1978 Washington Post article: “The Taub group...has learned that – despite the devastating loss of sensation and sensory feedback – these monkeys as infants exhibit nearly normal limb movements. ‘In short’, Taub said, ‘we’ve learned that these motor patterns do not necessarily depend on sensory feedback, as often proposed, but are instead part of the animals’ genetic endowment.’”

Taub is still proud of his work and is eager to explain it. “The animal, when born, has a long history of movement in the uterus – compensatory shifts in position, and so forth – and we wanted to perform intrauterine surgery in order to find out what those movements do for the animal,” he told me. “We exteriorized the fetus, still connected by the umbilical cord to the placenta, and put it on a little operative stage we developed, in a water bath, which was kept at the temperature of the fetus. We exposed part of the back and deafferented one limb. Then we restored the fetus to the womb and delivered it at the regular time. We did this with fetuses at various stages of gestation. We worked back to two-fifths of the way through gestation, close to the time of the first movement of the fetus. It was very difficult, and we had a very high mortality rate. We lost a lot at two-fifths of the way through, but we knew we'd have a large loss. We also began to ask whether there could be a sensory contribution to the education of these movements, and we wondered if maybe vision was substituting for absent reflexes and sensory feedback. So we took some of our behaviourally deafferented monkeys and sewed their eyelids closed to determine if vision was substituting for somatic sensation. It was not.” Any suggestion that the crippling of these fetal animals was cruel arouses Taub's irritation. “It wasn't trivial. It wasn't nasty. It wasn't mindless,” Taub has told me. “Everything was done in order to find a necessary answer to a necessary question.”

After Taub's grant for work with the monkey fetuses ran out, he submitted a proposal to the N.I.H. to continue his research on monkeys that had been deafferented as

young adults; the study was intended to gauge quantitatively what movement was lost after deafferentation and to ascertain whether, through behavioural training, the monkeys could learn to use the limbs in which they had lost all sensation. Taub intended to encourage the animals to use their “bad” arms in two ways: by restraining the normal arm and training the impaired one. He planned to euthanize the animals after eighteen months, to see if any part of the spinal cord had reorganized anatomically as a result of his behavioural experiments. The N.I.H. agreed to fund the study through its National Institute of Neurological and Communicative Disorders and Stroke; it planned to give I.B.R. nearly a quarter of a million dollars over the next two years. But Taub never got a chance to spend all the money, because when he was a year into the grant Alex Pacheco walked into his lab.

In May of 1981, Alex Pacheco was twenty-two years old. He was a political-science major at George Washington University. He had round brown eyes, brown hair, and a serious demeanour. That month, he had finished his classes for the year and was looking forward to devoting the summer to a special project.

Pacheco asked for a job at the Institute for Behavioural Research and was interviewed by Edward Taub. When Taub asked him why he wanted to work at the lab, Pacheco said he was trying to decide whether he was interested in pursuing a career in medical research – specifically, animal research. Taub told him that there was no job available but that he had some work for a volunteer. Pacheco volunteered. He didn't mention that he was a founding member of a group called People for the Ethical Treatment of Animals (PETA), or that three weeks earlier he had organized the first of a series of PETA demonstrations at the N.I.H. against animal research. Nor did he mention that during the demonstration he had given a speech condemning research that sounded almost exactly like that done at Taub's lab: fetal surgery on monkeys.

Alex Pacheco, who is now the president of PETA, has a Mexican father and an American mother. “I was raised in Mexico and various states here,” he said recently. “We moved back and forth a great deal. My father's an M.D. – ear, nose, and throat. My mom's a nurse. My mother didn't like Mexico, and my father didn't like the States. That's why we moved back and forth so much. Mexico was where I was first exposed to animals, wild animals. I had pets – monkeys, snakes.” Among his pets was a crab-eating macaque named Chichi.

Pacheco graduated from high school in Ohio, in 1977, and enrolled at Ohio State with the idea of eventually studying for the priesthood. In the summer following his freshman year, he took a trip across Canada, and one day he had an experience he was not prepared for: “I was staying with a friend in Toronto who had a friend who worked in a slaughterhouse, so just out of curiosity we decided to go and take a look

and get an unofficial tour. That's where I saw – Well, we'd slaughtered animals in our back yard in Mexico, but that was nothing compared with a real slaughterhouse. It's unbelievable."

The commitment to a spiritual life which had inspired Pacheco to plan for the priesthood was transformed in a week into a commitment to a different cause. "I didn't know what to do after I'd seen this," he said. "But I'd bring it up in conversations, and within a week somebody gave me Peter Singer's 'Animal Liberation'. I read one chapter that evening, and I haven't eaten meat since." Pacheco went back to Ohio State and established an animal-rights group on campus. By the next summer, he had allied himself with some of the more militant elements of what eventually became the animal-rights movement. He joined the crew of the Sea Shepherd, a vessel subsidized by the Fund for Animals (formed in 1967 by the writer Cleveland Amory), and also by Britain's Royal Society for the Prevention of Cruelty to Animals.

Next, Pacheco went to England. He spent several months there soaking up the uncompromising rhetoric of the British animal-rights movement, which at the beginning of the eighties was better organized and more radical than the American movement. When he returned to the United States in the summer of 1980, he moved to Washington, D.C., and enrolled in George Washington University with the idea of becoming a lobbyist on animal-rights issues. "The first thing I did, since I didn't know anyone, was to volunteer at the dog pound," he says. "That's where I met Ingrid."

In 1980, Ingrid Newkirk, thirty-one years old and recently divorced, was the division chief of the District of Columbia commission on Public Health, and also served as the pound master of the Washington dog pound. An only child, she was born in England but spent her early childhood in New Delhi, where her father worked as a navigational engineer. Later, she attended Catholic convent schools at hill stations in the Himalayas. Her mother was a volunteer with a number of charities, including Mother Teresa's.

In 1968, Ingrid's father's employer lent him to the United States Air Force, and the family moved to Florida. A year later, at the age of twenty, Ingrid married a race-car driver named Steve Newkirk and moved to Poolesville, in Montgomery County, Maryland, a rural suburb of Washington. She began working for an investment firm and studying to earn her broker's licence, but her plans changed abruptly in the summer of 1971, when a neighbour moved away and left nineteen cats behind. "I took some of them in," Newkirk says, "and then I called up the local shelter and got its address and drove the rest over." She was shocked by conditions at the shelter, and shortly gave notice at the brokerage firm and started working at the shelter. "The place was appalling", she recalls. "Eventually, I called the press and gave an interview to a local television reporter. I was fired immediately. So I called up the

head of the Montgomery County Council. She investigated and started helping to reorganize the whole place. It was cleaned up, and I was hired back – this time as a director. I was also asked for assistance in investigating cruelty cases, and after a few years I transferred to the county sheriff's office. In 1976, the Washington Humane Society asked me to take over the job of running the D.C. pound – the post had been vacant for some time – and I accepted. The first thing I did was to stop the acquisition of animals from the pound by research facilities.

“Alex came in to volunteer in 1980. At the time, I didn't know anything about the philosophical basis of animal issues I was a vegetarian for ethical reasons, and I had seen poor treatment of animals on farms. I had seen what was going on in research labs, too. But I had never questioned the human use of animals. I had believed you should be relatively kind in the use of them, but now I realized that you shouldn't use them at all – that it was exploitative and unnecessary.

Alex quickly came up with the idea of starting an organization. We thought it would be practical to pass on what we knew – to put together a list of places where you can find good vegetarian food, for instance.” But Pacheco and Newkirk – who by now were romantically involved and were living together in the apartment that would serve as PETA's headquarters – also had more ambitious goals in founding PETA. They wanted to move beyond what they saw as the passive aims of the American animal-protection societies' campaigns to neuter pets; they wanted to attack the major industries that involve animals – furriers, meat packers, and the biomedical community. PETA's stance from the beginning was uncompromising: all animal experimentation was morally wrong. PETA continues to insist that it can be replaced by human epidemiological studies and the use of cadavers and by such new techniques as in-vitro cell culturing and computer modelling, but scientists argue, more realistically, that the development of everything from vaccines to organ transplants is heavily dependent on the use of animal models.

The tactics that PETA would pursue thereafter were born with Newkirk's idea of sending Pacheco into a lab to work undercover. The success of Newkirk's exposure of the conditions at the pound seems to have inspired a reliance on confrontational tactics, and ever since infiltrating Taub's lab they have favoured undercover work and dramatic exposés of alleged wrongdoing, preferring to take researchers by surprise. Pacheco claims that the ease with which he “fell upon the atrocities” at I.B.R. was evidence of how commonplace such conditions were in research laboratories. He has told the story of his first impression of the lab many times – to reporters, to Congress, in an essay and on videotape – but in none of his accounts does he mention the fact that he had singled out fetal surgery for censure before choosing I.B.R. He told me that he leafed through a Department of Agriculture directory of registered animal-research facilities, looking for one that was convenient to his apartment. “I thought it would be pretty hard to find one that would take me right off

the street, with no experience, but I.B.R. was the first one on my list and it took me in,” he said. Pacheco’s omissions play down the sneakiness of his tactics and make it seem that atrocities are waiting behind any randomly chosen lab door.

Federally funded laboratories – a category that includes government labs, most university labs, and many private ones – are not always subject to state or local anti-cruelty statutes. Animal labs are generally regulated by the United States Department of Agriculture whose inspectors follow the guidelines set by the Animal Welfare Act and the Public Health Service’s animal-welfare policy. The N.I.H. also publishes, for its grant recipients, a “Guide for the Care and Use of Laboratory Animals”, which sets species-specific standards for cage sizes, sanitation, and veterinary care. All institutions that conduct animal research are required to create an Animal Care and Use Committee, consisting of at least one veterinarian, at least one scientist versed in the area of animal research, and one person who is not otherwise affiliated with the institution. The committee must review and approve all grant proposals involving animals and decide such matters as whether a protocol calling for surgery without anesthesia is warranted; theoretically, a researcher can do anything to an animal – burn it, radiate it, drug it, and shoot it in the head – as long as the protocol is approved. Animal-rights activists consider the Animal Care and Use Committees rubber stamps for researchers and the Animal Welfare Act ineffectual. Alex Pacheco didn’t expect to be able to accuse Edward Taub of breaking any laws, but he may well have been looking forward to exposing the flaws in the Animal Welfare Act by using Taub’s lab as an example.

A month after Pacheco began work, he was asked to help with an experiment. It was called “the acute-noxious-stimuli test”, and involved removing one of the deafferented monkeys from its cage, immobilizing it in a “chair” that restrained it at the neck and waist, and attaching the “acute noxious stimuli” – in this case, a haemostat, or surgical clamp – to different places on its damaged arm, in order to observe whether the monkey seemed to have any sensation in the arm. Pacheco says that one of the research assistants once clamped the haemostat onto the testicles of one subject monkey, Domitian. He also says that the assistant put the clamp between Domitian’s teeth and raked it across the roof of his mouth. Pacheco says that he fabricated data rather than apply the haemostat to the animal’s body himself. Around the time he started working on this experiment, Pacheco told Taub that he wanted to work evenings and weekends, and Taub gave him a set of keys to the lab. Pacheco began to keep a record of his findings: that the sacks of Purina monkey chow from which the monkeys were fed were marked with an expiration date four months earlier than the date when he started work at the lab; that the animals’ medication, kept next to a bag of rotting apples in a refrigerator, had expiration dates that went back more than ten years; that a freezer in the lab held the corpse of a monkey named Caligula, who had been destroyed after developing gangrene.

He noted that the lab was infested with mice and cockroaches, and that in places the wire mesh of the animals' cages was broken and sharp wires protruded into the cages. He discovered that the cages could not be moved for cleaning, because they were held against the walls of the room by the pipes of the animals' watering system. He observed that the caretakers who took turns cleaning the animals' room at night – two college students – emptied the animals' waste trays but did not clean them.

Some of the monkeys had unbandaged sores or seemed to be missing parts of their fingers, or whole digits. In his nightly visits, Pacheco was getting to know the animals, and he felt that they were displaying symptoms of psychological deprivation and malnourishment, and were mutilating their crippled arms out of stress. "I had a monkey once as a pet," Pacheco told me. "The same kind of monkey, the same species. Anyone who's ever lived with a primate knows they have minds, just like people. They have personalities. Some of the monkeys were distant, others were afraid; others just didn't really care if you were there or not. The boss, the leader, was Chester. He was the dominant guy – you could see that he wanted to protect the pack. He would come to the front of his cage and puff up and display.

The saddest one was Billy. The other monkeys would do one of two things when you opened the doors of their cages: either they would try to fly out or they would run to the back of the cage and climb to the top, in the corner, and grimace and screech. But Billy had both of his arms crippled – he'd been bilaterally deafferented. They called him Billy the Bi-Lat. Since he couldn't do anything when you opened the door. He couldn't fly out – if he died, he'd fall to the floor. He couldn't climb, either, so he'd just sit there in the front of his cage with a submissive expression and make submissive sounds – he'd just basically pray for mercy."

Pacheco says that he grew more and more disgusted by the conditions at the lab, and depressed because there seemed to be nothing he could do about them. But at no point did he complain to Taub or to any of Taub's assistants that the animals were not fed regularly or their cages weren't cleaned properly. In the middle of June, a month after he started working at I.B.R., he began taking photographs at night, and also, surreptitiously, during the day. He and Newkirk had decided to give his evidence to the media, in the hope that an exposé would embarrass Taub and I.B.R. into shutting down the lab – or, at least, into improving conditions.

In the middle of July, Pacheco went to Manhattan to seek the advice of Cleveland Amory, the president of the Fund for Animals, Amory gave him five hundred dollars to buy a better camera and also lent him a pair of the Fund's walkie-talkies, so that Newkirk could wait outside the lab during his night-time visits and warn him if anyone was coming.

By late July, Pacheco and Newkirk had come to feel that a media exposé was not enough. They talked with a local attorney, David Scull, who was a member of the

Montgomery County Council, about the possibility of taking legal action. Scull suggested that the Maryland statute concerning cruelty to animals, unlike other state statutes, might not exclude research laboratories. Pacheco checked the wording of the Maryland anti-cruelty law and found that there was no exemption for labs. He and Newkirk began preparing to take their evidence to the police.

As the two collected their evidence, Pacheco became more and more horrified. One night, he noticed a contraption near the lab refrigerator. It looked to him like the stripped-down shell of another refrigerator, without a door, and it was outfitted with a Plexiglas restraining chair. Pacheco has written, “a monkey would be placed in the (chair), and electrodes attached to his body. The monkey would be forced to try to squeeze a bottle of fluid with his surgically crippled arm in order to stop the painful electric shock. ... The ceiling and walls of the chamber were covered with blood. I remembered Taub’s assistant, John Kunz, telling me that some monkeys would break their arms in desperate attempts to escape the chair and the intense electric shocks.” (Both Kunz and Taub say that electric-shock equipment was never used in the lab.).

To Pacheco, everything about the lab was a disgrace; he made no distinction between the effects on the monkeys of the federally sanctioned experiments and the effects of poor care in the lab. It was all abhorrent to him. But he realized that his opinion would be viewed as that of a layman, so his testimony might not carry much weight with the authorities. In August, he and Newkirk began looking for scientists and veterinarians who would be willing to visit the lab and whose affidavits describing the condition of both the animals and the facilities could be added to Pacheco’s photographic and written evidence.

They were careful not to approach anyone who might be so unsympathetic as to blow the whistle on them. The first person they talked to was Dr. Geza Teleki, a professor of primatology at George Washington University. Teleki, who is now the chairman of the Committee for the Conservation and Care of Chimpanzees, was the Washington representative of the Jane Goodall Institute in the late nineteen-eighties, and has supported Goodall in her harsh criticism of the research community’s treatment of chimps. But, according to Newkirk, Teleki was “sceptical and hesitant” when they approached him; eventually, however, he agreed to visit the lab and give his expert opinion. Pacheco and Newkirk also enlisted Dr. Michael Fox, a veterinarian who was the scientific director of the Humane Society of the United States and known for criticizing his own profession; Donald Barnes, a primate researcher who had resigned his longstanding position as a research psychologist for the Air Force, six months earlier, because of doubts about the utility of the radiation experiments he was asked to perform; Dr. Ronnie Hawkins, a physician who had conducted primate research at the University of Florida Medical School; and John McArdle, a primate anatomist, who was later to serve as the director of the Humane Society’s laboratory-animal –

w.....department. All five were involved in some way with antivivisection... animal-protection groups, and had experience working with performing research on prim... On five nights between August 24th and September..... Pacheco secretly conducted the scientists through the lab, and notarized affidavits they submit condemned the conditions I.B.R.'s Behavioral Biology Center in the strongest possible terms. Donald Barnes wrote tha.....found it "almost unbelievable.....this laboratory qualifies for fun....by any agency, " and that " this laboratory... appears to abuse... its fiscal responsibility to ... U.S. Government by abusing variable resources procured through Federal funding." Geza Teleki wrote:

I have never seen a laboratory poorly maintained for animal subject or human researchers ... Because the direct risk of the transmission contagious, air-borne diseases between human beings and non-human primates, a primate laboratory is a tentially lethal installation. Besides contributing to an uncomfortable living situation for the animals, the lack of proper ventilation and precaution against the spread disease from the monkeys to human patients, staff and visitors...defies all reasonable health standards.

ARMED with the affidavits and the photographs he had taken Pacheco went to the office of the State Attorney for Montgomery County with a lawyer. After looking at his evidence an attorney there set up a meeting with the police. And the police, after seeing the evidence, applied for a search-and seizure warrant, planning to do what several of the affidavits had suggested – to remove the animals from the lab. But they couldn't find anywhere to put them. The Montgomery County Humane Society said that it didn't have facilities for seventeen monkeys. Finally, Lori Lehner, an employee of the Humane Society and a member of PETA, offered the basement of her house, in Rockville. Not knowing what else to do, the police agreed to place the animals there, under police custody, provided that Lehner made some alterations. So Lehner had a new concrete floor poured, installed a drainage system and a ventilation system, and, with the help of volunteers, built large cages.

On Friday, September 11, 1981, a dozen police and animal-control officers arrived at the lab at 8.45A.M. A few minutes later, they were joined by a television camera crew and a number of newspaper reporters holding press releases distributed by PETA. Richard Swain, the detective in charge of the operation, was furious. The search warrant was supposed to be a secret; it was, in fact, illegal in Maryland for Pacheco to announce it to the press. But Swain proceeded to the business at hand. He and his team went through the back door and into the animal room. "It was absolutely filthy, just incredibly dirty, like nothing I've ever been in," Swain told the Washington Post. "I've worked in murder, in narcotics, in vice, but this was the first time I went into a room and felt legitimately concerned for my health just being there."

The police had asked Geza Teleki to be present during the raid to advise the animal-control officers on the handling of the primates, and Teleki remembers that the monkeys, who had been living for several years in the windowless room of the lab, became “really agitated” on being brought out into daylight and put in cages in a truck. Newkirk, Teleki, and Pacheco supervised the installation of the monkeys in Lori Lehner’s basement. With money donated by several animal groups, PETA saw to the welfare of its charges. Two zoo veterinarians – Janis Ott, from the Brookfield Zoo, in Brookfield, Illinois, and Phillip Robinson, from the San Diego Zoo – were flown in to examine each of the animals. The monkeys’ wounds were cleaned and bandaged. Specialists were employed to perform services that Ott and Robinson had suggested; Billy for instance, had an infected tooth removed. The animals were given branches and toys, things to rattle and things to smell, and their Purina monkey chow was supplemented with fresh greens, unsalted nuts, peeled oranges, and grapes. A television set was brought into their room and tuned to soap operas during the day. The cages of two of the monkeys who had been observed to be fond of each other – Adidas and Sisyphus – were placed close together, so that the monkeys could touch. Volunteers sat with the monkeys and groomed them with toothbrushes.

EDWARD TAUB was not at the lab when the police arrived that Friday morning. He had not been to the lab for almost three weeks, in fact, because he had been vacationing with his wife on the island of Chincoteague, off the Delmarva Peninsula. The couple came home two days before the raid, but he had planned not to return to work until the following Monday. Shortly after nine on Friday morning, a research assistant at the lab called him at home to let him know what was going on. Taub told me recently, “I immediately went to the lab, and all these media people were there. It was so bizarre. I couldn’t believe it was happening. I had a sense of unreality. By the time I got here, the animals were being transferred into a truck. I had to stand by helplessly. Then the police stayed on and tossed the lab. They searched my office, confiscated files.” To a Washington Post reporter on the scene Taub said, “I’m surprised, distressed, and shocked by this. There is no pain in these experiments. We surgically abolish pain.”

The Monday after the raid, William Raub, who was then N.I.H.’s associate director for Extramural Research and Training, formally instructed the N.I.H. Office for Protection from Research Risks, which handles complaints concerning both human and animal research subjects in federally funded facilities, to conduct an investigation of Taub’s lab and Pacheco’s allegations. Raub had been a career administrator at the N.I.H. since 1966, and in 1989 he became the acting director of the N.I.H. At the time of the raid, Raub was in charge of overseeing all N.I.H.-funded research projects pursued on sites other than the N.I.H. campus. Because he was the highest official at the N.I.H. with direct responsibility for Taub’s lab, he became the spokesman for the N.I.H. on all matters concerning the Silver Spring monkeys; he eventually came to be

the focus of criticism from both scientists and animal-rights activists angered by the N.I.H.'s handling of the case. After negotiations with Taub and others at I.B.R., the N.I.H. set the date for a site visit for September 21st, ten days after the raid. Meanwhile, the lab was examined by inspectors from the Department of Agriculture. U.S.D.A. inspectors had dropped in on Taub's lab once during the four months Pacheco worked there, but had noted no serious deficiencies. Now the inspectors found only four "minor deficiencies."

A week after the raid, and after the "deficiencies" were corrected, Taub appeared in the Montgomery County Circuit court and asked that his files and his monkeys be returned. He said that he was willing to allow the State access both to the files and to the animals on their return, so the judge ordered the return to be carried out, asking Taub's lawyers to negotiate with the State on the details of the animals' transportation and their future treatment and access. Three days later, a committee of eight N.I.H. officials – lawyers, veterinarians, and an acting deputy director of the institute that had financed Taub's grant – conducted their site visit: they spent five hours questioning Taub and other officers of I.B.R., touring the facility, and viewing the empty cages. (The animals had not yet been returned.)

The day after that visit, the State's attorneys appeared again in court, requesting that the judge reconsider his decision to return the monkeys to Taub. They also revealed that the monkeys, which both the judge and Taub's lawyers had assumed were still in Lori Lehner's basement, were missing.

EVEN today, if you ask Alex Pacheco what happened to the monkeys when they were taken from Lori Lehner's house, he just shrugs and smiles; neither he nor anyone else involved in PETA at the time has ever acknowledged taking them. If you ask Pacheco whether the monkeys were driven to Gainesville, Florida, in a rented van, he says, "That's a pretty good guess." Ingrid Newkirk hasn't much more to say about the monkeys' hideout, but in "Free the Animals!" – a book on the Animal Liberation Front, which she published last summer – she claims that "Valerie," whom she describes as a policewoman on Rick Swain's staff, was so moved by the plight of the monkeys that she aided in their escape. Rick Swain says that "'Valerie' does not now nor has she ever existed as a Montgomery county police officer," but regardless of where she came from, "Valerie" shortly afterward founded the Animal Liberation Front, an underground organization whose members break into laboratories, demolish equipment, and "liberate" research animals. She recently posed, in disguise, with Ingrid Newkirk for *People* magazine.

When the judge was told of the monkeys' disappearance, he had Lori Lehner brought in for questioning. She pleaded ignorance, saying that she had come home late on the night of September 21st to find that someone had broken in and stolen them. She said that a chain-link fence on her property had been cut. The judge had had enough.

He had Lehner arrested for contempt of court and put her in the county jail; she was released the next day.

The burlesque of the monkey-napping had its serious side. It was PETA's first flirtation with the notion of an animal-rights underground; thereafter PETA acted much as Sinn Fein does for the I.R. A., tacitly condoning, but not openly supporting, the A.L.F.'s acts of violence and vandalism. Pacheco eventually seems to have realized that the State could not prosecute Taub without the monkeys. On Saturday, September 26th, the monkeys were returned to Lori Lehner's basement, and two days later Montgomery County police charged Taub and his assistant, John Kunz, with seventeen misdemeanor counts each of animal cruelty.

A week after the monkeys reappeared, the judge ordered that they be returned to Taub's lab and placed under the care of a court-appointed veterinarian. The PETA volunteers who had been seeing to the monkeys' needs did not give them up easily. When workers from I.B.R. showed up at Lori Lehner's house with a rented truck to take the monkeys back to the lab, they were refused entry for several hours, until they could present a copy of the court order.

A FEW days after being returned to the lab, one of the monkeys, Charlie, suffered what Taub described to a reporter as "a heart attack." Taub claims that Charlie died because of an overdose of anesthesia administered by a court-appointed vet after Charly was bitten by one of the other monkeys. After hearing of this, the judge reversed his order and remanded the monkeys to an N.I.H. Animal Center in Poolesville.

This was bad news for Taub, but he had just received worse. On October 8th, the N.I.H. had suspended his research grant, charging that "I.B.R. failed in significant ways to comply with requirements of the Public Health Service applicable to the care and use of Laboratory animals." The N.I.H. had also released the report prepared by its site-visit team. The report confirmed the criticisms in Pacheco's affidavits, citing five major areas in which Taub's lab had failed to comply with the Animal Welfare Policy of the Public Health Service and with the N.I.H.'s own standards in the "Guide for the Care and Use of Laboratory Animals": it stated that adequate veterinary care had not been provided; that the lab's Animal Care and Use Committee was not properly constituted and had failed to oversee the lab's treatment of the animals; that the monkeys' physical facilities were inadequate; that the occupational-health program for the staff was inadequate; and, finally, that the condition of the laboratory on September 11th (as depicted in police photographs) was grossly unsanitary." The report called for, among other things, the installation of movable stainless-steel cages and a new ventilation system, with separate circulation for the human and

animal rooms. The N.I.H. would provide funds only for the care of the monkeys and only until Taub could find another source of money for their care.

Just two weeks before his fiftieth birthday, Edward Taub had suffered a raid on his lab, the seizure of his monkeys, damage to his reputation from charges of animal cruelty and neglect, the suspension of his grant, and his own arrest. Since his salary had been paid out of the grant, that, too, was gone. He had conducted some twenty-five years of research, had received more than a dozen federal grants, and had had numerous articles published in some of the most highly respected scientific journals; nothing had prepared him for the role of criminal defendant.

AT the first trial, held during the last week of October, 1981, before District Court Judge Stanley Klavan, Edward Taub and his assistant, John Kunz, both pleaded not guilty. (Under the Maryland rules for misdemeanors, there was no jury.) The prosecutor, Roger Galvin, called Alex Pacheco as his first witness, and Pacheco testified about his experience at the lab, and described how he had obtained the photographs and the affidavits.

The next day, Phillip Robinson, the vet from the San Diego Zoo who had examined the monkeys after the raid, testified that several of them had been in need of immediate medical attention, and that Billy's fractured arm had been either ignored or treated incompetently. For its part, the defense, led by Edgar H. Brenner, called its own vets and the U.S.D.A. inspector who had inspected the lab on previous occasions; he testified that it had met all U.S.D.A. regulations, except for occasional "minor deficiencies." Taub then testified for several hours in his own defense. He claimed that at the time of the raid the monkeys were remarkably healthy, and that they had never been neglected. In response to Pacheco's allegations that the laboratory was "filthy," he said, "A monkey room can get dirty in three minutes".

At the end of November, Judge Klavan ruled that Taub was guilty of six counts of an animal cruelty, and fined him three thousand and fifteen dollars – five hundred dollars for each count and fifteen dollars in court costs. John Kunz was acquitted on all the charges, the judge's reasoning being that Taub, and not his employee, bore the responsibility for the care of the animals in the lab.

Because Taub had been convicted on misdemeanor charges by a judge, he was entitled under Maryland law to a new trial, by jury. During that trial, which took place in June of 1982, the defense presented some evidence that it had not presented in the first trial. Taub's lawyers were able to submit records attesting to the vigilance of the monkeys' caretakers during the four months when Pacheco worked in the lab. They suggested that the caretakers' frequent absences during Taub's three-week vacation, when Pacheco brought in his experts, could possibly be attributed to bribery. They submitted the bills of exterminators whom Taub had paid to eradicate the *vermin*. They called numerous expert witnesses from professional societies who testified that Taub's work was professional and sound.

The testimony was limited to the six animals named in the six counts of which Taub had previously been convicted, and Taub explained that the injuries suffered by those deafferented monkeys were self-inflicted. Their affected limbs, he said, were subject to the same accidental damage as the limbs of people suffering from leprosy, who can't feel cuts or bruises or undue pressure on their extremities. Where a wild animal will normally worry a bandage applied to it but will usually stop because of pain, an animal with a bandage on a deafferented limb will not stop, because there is no sensation in the limb, and so lesions develop around bandages. Taub said that he avoided bandaging animals who consistently mutilated themselves, and that he would leave a bandage on an animal that would tolerate it, rather than change it daily, in order to minimize such self-mutilation.

After deliberating for three days, the jury acquitted Taub on five of the counts, and convicted him only on the sixth, which charged him with failing to supply adequate veterinary care to the monkey named Nero – a state of affairs that the jury believed had led to the amputation of Nero's deafferented arm at the Poolesville facility.

To Taub, one conviction was almost as bad as six; he believed that his professional reputation would always be tainted by it. He wanted to clear his name, and, a year later, in August of 1983, he achieved at least partial success in doing so. The Maryland Court of Appeals found that the state anti-cruelty law under which he had been convicted did not apply to him. The Appeals Court didn't address the merits of his conviction, but instead ruled that Taub's actions as a federally funded researcher were subject only to federal law, and that the Maryland legislature had not intended the state law to apply to those researchers. The court therefore overturned his conviction.

OVER the next several years, Edward Taub appealed to a number of scientific organizations to investigate his case. Several did, including the ethics committee of the American Psychological Association, the animal-care committee of the Society for Neuroscience, and the American Physiological Society, which conducted the most extensive investigation, interviewing Roger Galvin, Alex Pacheco, and other key participants. All three organizations exonerated Taub completely, and, in 1984, the Grant Appeals Board of Health and Human Services, while refusing to reinstate his grant, declared that Taub was not guilty of providing inadequate veterinary care to any of his animals. Eventually, sixty-seven different scientific societies pledged support for Taub, and two delegations were sent to the N.I.H. to lobby for the reinstatement of his grant. The N.I.H. began to come under fire from scientists all over the country, many of whom occupied influential positions in universities and corporations conducting biomedical research, for appearing to give in to animal-rights activists – or, as these scientists saw them, animal-rights extremists.

In 1982, the Animal Liberation Front had begun breaking into research laboratories around the country in order to steal evidence of alleged wrongdoing and to free lab animals. Over the Memorial Day weekend of 1984, some of its members broke into the Head Injury Clinic at the School of Medicine on the University of Pennsylvania campus and stole some forty hours of videotape documenting the laboratory's experiments on baboons. In an attempt to replicate the kinds of head injuries that human beings suffer in car accidents, the experimenters, who had received a million dollars a year for the past thirteen years from the N.I.H., had placed the baboons' heads in metal helmets and then violently thrust them forward, using a hydraulic device. While the experiments themselves were disturbing to watch, the videotapes also documented scenes of shocking carelessness on the part of the experimenters. There were scenes in which student experimenters held injured but conscious animals in ridiculous poses and laughed at them; in other scenes, researchers smoked while performing surgery on live animals, and one researcher dropped an implement on the floor during surgery, picked it up, and reinserted it in the body. The Animal Liberation Front provided PETA with a copy of the stolen videotapes and also gave a copy to a young lawyer named Gary Francione, who had recently accepted a teaching position at the university's law school, having come to Penn from the Wall Street law firm of Cravath, Swaine & Moore, because he wanted more time to do pro-bono work on animal-rights cases. Francione, who met Ingrid Newkirk and Alex Pacheco when he was clerking for Supreme Court Justice Sandra Day O'Connor and who is now a tenured professor at Rutgers Law School, is a free agent in the animal-rights movement, not a member of any group. He has established an Animal Rights Law Clinic, the nation's first, at Rutgers, and he takes whatever cases interest him. He has brought suit against people conducting animal sacrifices as part of their religion, and defended students who objected to performing dissections in schools. He has also worked closely with PETA, donating thousands of hours of his time and reams of free legal advice to Alex Pacheco and Ingrid Newkirk. He believes that eating meat and experimenting on animals are moral equivalents of murder and torture. He is also vocal in his support of other causes – abortion rights, gay rights, and women's rights.

After the A.L.F. provided Francione with a copy of the stolen tapes, he went to the university's provost and told him that he should close the Head Injury laboratory down and conduct an investigation. According to Francione, the provost told him to mind his own business and go back to the law school. "Instead, within one day, I got half the law-school faculty to sign a petition demanding an investigation," Francione said. "When the petition became public, of course, the university got very upset." Francione went on, "The Taub thing wasn't really animal-rights litigation. It was a criminal prosecution for animal cruelty. The Penn case was beautiful, though. It had large amounts of federal money, an Ivy League institution, and top-rate neurosurgeons doing bullshit work that was not only doing anything to help human

beings but was being conducted in such a way that it couldn't *possibly* help human beings. The data they were getting were polluted by conflicting variables. The N.I.H. and the university took the position that it was a great lab, and the guys in charge of the lab, Thomas Gennarelli and Thomas Langitt, said they had always passed their U.S.D.A. inspections. But I had a copy of a letter that the Dean of the Penn medical school sent to Gennarelli in 1982 telling him that the lab had to be closed because it was not in compliance with federal standards. When the N.I.H. came out and said it was a perfect lab – boom! I released that letter and sent it all over Capitol Hill. The university went nuts!

“It was a perfect case. A major Ivy League university getting millions and millions of federal dollars is lying and beating up monkeys. It really helped to radicalize people. The criticism of biomedical research was not nearly as vocal before Penn as after Penn.”

For more than a year, the N.I.H. refused to withdraw funding for the Head Injury lab. On July 15, 1985, led by PETA, ninety animal-rights activists went to Building 31 on the N.I.H. campus, rode the elevator up to the eighth floor, and sat down in the office of the director of the National Institute of Neurological and Communicative Disorders and Stroke, Murray Goldstein. The Institute had funded the Penn lab as well as Taub's work with the Silver Spring monkeys. Francione, who served as legal counsel for the group, described the occupation as “a real weird four days,” and added, “No one thought it would last that long, including me. I assumed that everyone was going to get arrested and dragged out right away. But I think N.I.H. was afraid of mishandling it.”

On the last day of the sit-in, Dr. James Wyngaarden, the director of the N.I.H., met with Francione and Pacheco and announced that Margaret Heckler, the Secretary of Health and Human Services, had decided to close the Penn lab pending a full investigation. It is difficult to overstate the effect the closing of the lab had on the biomedical community: its members felt that the decision reflected weakness on the part of N.I.H. and heralded an era when witch hunts would be tolerated and hysterical accusations believed. They besieged the N.I.H. with angry calls and letters, and it was their fierce reaction that sealed the fate of the Silver Spring monkeys.

DURING the occupation of Building 31 by PETA, Gary Francione had met with William Raub, Murray Goldstein, and an N.I.H. lawyer. Francione says that he took the men to task about the monkeys, who were still in N.I.H. custody in the primate facility in Poolesville, because I.B.R. had so far been unable to construct proper quarters for them. “The complaint seemed to hit a nerve,” Francione said. “I thought Murray Goldstein was going to jump out of his chair. He said, ‘You want the Silver Spring monkeys! They cost me money, they cause me aggravation!’ I said ‘Yes. I

would like them.’ And the N.I.H. lawyer said, ‘Look, why don’t you talk to I.B.R.! if you can get them to relinquish any right, title, and interest that they may have, get them to put it in writing. And you can have the Silver Spring monkeys.’”

Francione spent the next couple of months persuading I.B.R. to send a letter to the N.I.H. relinquishing ownership of the monkeys. It did so in September, and Raub immediately wrote back, saying that the N.I.H. refused to accept ownership, because “we have not research protocols, either ongoing or planned, for which these animals are appropriate.” Between July and September, Raub had apparently realized that if the N.I.H. should be seen to be cooperating with PETA it might occasion a fresh outcry from the scientific community.

Meanwhile, PETA began a lobbying effort on Capitol Hill. In April of 1986, at the urging of Alex Pacheco, two members of the House of Representatives- Robert Smith, A Republican from New Hampshire, and Charlie Rose, a Democrat from North Carolina – drafted a petition asking the N.I.H. to send the fifteen remaining monkeys to a non-profit sanctuary in San Antonio, Texas, called Primarily Primates. Their petition was signed by two hundred and fifty-two members of the House.

Initially, it seemed that the N.I.H. would go along with this plan. In June, James Wyngaarden sent a letter to Smith in which he agreed that the monkeys should be transferred from Poolesville to two facilities that seemed appropriate for them – Primarily Primates and Moorpark College, in Moorpark, California, a college known for the training of zoo caretakers to handle exotic animals – and that the monkeys’ deafferented limbs should be amputated, since all agreed that the procedure would substantially improve their health. He added that “these animals will *not* undergo invasive procedures for research purposes,” and that any research analysis of their bodies would be carried out during autopsies after “the natural death of each animal.” Both PETA and the congressmen were pleased with Wyngaarden’s response. It later appeared, however, that the N.I.H. had never intended to honour its commitments. On the night of June 23rd, the N.I.H. abruptly transferred the fifteen monkeys to the Delta Regional Primate Research Center, in Covington, Louisiana, and both PETA and the congressmen with whom it had been negotiating the monkeys’ fate claim that they were not informed. Delta, which is administered by Tulane University (and has recently dropped the name Delta), is one of seven federal regional primate-research centers in the country, and it is noticeably less convenient to PETA protesters – and, presumably, to possible rescuers from the Animal Liberation Front – than the Poolesville facility.

In the summer of 1987, Rose, Smith and several other members of Congress finally persuaded the N.I.H. to send the five control monkeys – Chester, Adidas, Sisyphus, Haydn, and Montaigne – to the San Diego Zoo. Meanwhile, Sarah and the eight remaining experimental monkeys, whose deafferented limbs had never been amputated, were still isolated in individual lab cages at Delta. PETA and the International Primate Protection League and others had unsuccessfully pursued

custody of the monkeys through several courts, and in April of 1987, the Supreme Court declined to hear their case.

IN 1988, PETA made one last attempt to place the monkeys in a private facility. In September, Delta gave Pacheco permission to visit the monkeys and he immediately flew to Louisiana. He was accompanied by Gary Wilson, the director of Moorpark's exotic-animal program, and also by a Moorpark veterinarian. Wilson was considering taking some of the experimental animals still at Delta as well as those temporarily housed at the zoo.

Before setting out for Delta, Wilson and the vet had been told that a blue-ribbon panel of veterinarians and scientists had examined the monkeys on behalf of the N.I.H. earlier in the year and had concluded that many of the experimental monkeys were in poor condition and would need to be euthanized, for humane reasons, in the very near future. "When we saw the animals, we were surprised at what good shape they were in," Wilson said recently. "It seemed to us that the case the N.I.H. had made was overblown." Wilson and the Moorpark veterinarian examined all the monkeys at Delta – Domitian, Augustus, Billy, Big Boy, Titus, Nero, Allen, Paul and Sarah – and concluded that their health was fairly good and they were able to travel. A few weeks later, Wilson sent a report to William Raub, offering to provide a home for all of them except Paul, who was a carrier of herpes B, a virus not serious in monkeys but often fatal to human beings, and detailing how they could be safely transported to Moorpark College.

In reply, Raub wrote that Wilson's report was "inaccurate, incomplete, and otherwise seriously misleading." He urged Wilson to "make decisions strictly on the basis of the pertinent facts and informed opinion," and continued, "For you and I to do otherwise is to become pawns for those who desperately seek to devalue the opinions and impugn the integrity of the several experts whose wise counsel has guided the N.I.H....to date in caring for the monkeys."

According to Wilson, who declined to change his report, Moorpark got caught in the middle, between the animal-rights people and the N.I.H. "The whole experience was eye-opening, to say the least," he told me. "After my report came out, protest calls were made to Moorpark's president from people in the biomedical community. The editor of a biomedical-research journal told me he believed that if the monkeys were released from Delta it would mean the end of biomedical research as we know it." After rebuking Gary Wilson, Raub wrote to Representative Smith about three of the monkeys – Billy, Paul and Domitian – saying that their condition has worsened to such a degree that "to keep (them) alive for any significant additional time would constitute animal cruelty." He wrote, "We have deferred the euthanasia decision since July However, further delay no longer is tenable."

RAUB, PETA learned, was also interested in promoting a research project involving the monkeys which had been proposed to him a year earlier. Dr. Mortimer Mishkin, the chief of the Laboratory of Neuropsychology at the N.I.H.'s Institute of Mental Health, and a colleague, Dr. Tim Pons, had suggested that when the monkeys needed to be euthanized for humane reasons an examination of their brains might yield information about the brain's ability to reorganize after the body has suffered the effects of deafferentation of similar damage to the spine. Following the study, the animals would be euthanized. Mishkin was hardly a disinterested party. He had known the chairman of I.B.R.'s Board of Directors, Dr. Joseph Brady, for many years. He had also served on the N.I.H. panel that reviewed the decision to end Taub's grant and had been the only dissenter, and he was a past president of the Society for Neuroscience, which had exonerated Taub.

The experiment seems a clear violation of the N.I.H.'s previous pledge that the monkeys would undergo no further invasive procedures, but Raub expresses impatience when he is asked about the discrepancy between that earlier assurance and the later proposal for the experiments. "Not only have we explained this many times but we were very systematic in apprising the members of the Congress of exactly what we were doing," he told me. "It was a matter of semantics about what was invasive procedure. When N.I.H. made the decision to move the animals to the Delta Primate Center, the only objective we had then was to fulfil our custodial responsibilities. As the years passed, however, neuroscience changed. And what emerged, ironically, was a set of questions that could be answered only with the Silver Spring monkeys.

"The Silver Spring monkeys were the first animals ever, to the best of the knowledge of people in neuroscience, in which so large an area of the brain – namely the region corresponding to the map of an entire forelimb – had been devoid of its normal sensory input for as long as a decade. The scientists involved produced a protocol that in my judgement addressed the scientific questions and also met the spirit of what we had written to the Congress. The animals would receive what is called a surgical level of anesthesia; that is, they would be anesthetized much the way you or I would be were we to undergo a procedure in a hospital. Then the relevant area of the brain would be exposed, and a micro-electrode, whose tip one can barely see with the naked eye, would be placed in and around the cells on the surface while the body of the animal was stroked with a camels'-hair brush. Then, once the electrical records were gathered, the euthanasia would be completed and the tissues prepared for post-mortem study. Now, one could argue semantically that a procedure is invasive if a part of the brain is exposed."

One could. Congress did. In July of 1988, after the plan was announced, Representative Rose wrote to Secretary of Health and Human Services Otis Bowen that if the experiment was carried out he "could expect animal-protection organizations, individuals around the country, and Congress to explode in anger,

generating a reverberation that could have long-range effects on N.I.H. I would consider it a very serious violation of a commitment to me, to the Congress, and to the public.”

The White House was deluged with correspondence on the issue, most of it in support of PETA's position. Barbara Bush alone received more than forty-six thousand pieces of mail concerning the monkeys. In the first few months of 1989, the monkey Paul gradually lost sixty per cent of his body weight while the N.I.H. and PETA battled over whether or not to euthanize him. PETA claims that it asked the N.I.H. to euthanize him and its request was rejected; the N.I.H. claims that PETA's attempt to win a court injunction against the experiment held up the long-overdue mercy killing. In August, Paul died.

In January of 1990, Billy, the bilaterally deafferented monkey, was said by N.I.H. veterinarians to be weak. On January 14th, eight years after he was removed from Taub's lab, he became the first monkey to undergo the Pons-Mishkin experiment and euthanasia. Six months later, after a federal judge refused to grant a temporary restraining order, and despite the pleas of a congressional delegation led by Robert Smith, which met with Raub and asked him to reconsider, three more monkeys – Augustus, Domitian, and Big Boy – were experimented on and euthanized. In April of 1991, Titus and Allen were euthanized; the research was written up and published in *Science*, with Taub's name among the credits.

Although PETA and the other plaintiffs could no longer hope to save all the animals, they kept up the pressure in the courts. Originally filed in Louisiana Civil District Court, their suit against the N.I.H., the I.B.R., and Tulane attempting to stop the experiment and claim custody of the remaining animals was removed to federal courts and there dismissed on the ground that animal-rights groups lacked standing to sue for custody of animals in federal institutions.

The suit eventually travelled to the United States Supreme Court, and in May of 1991 (too late for the monkeys) the Court ruled that it should not have been removed to the federal arena. Accordingly, it was sent back to a Louisiana state court.

The case bounced back and forth again until last October, when another federal judge ruled, without addressing the merits of the case itself, that the plaintiffs lacked standing to sue. The judge did not comment on a ninety-two-page memorandum compiled by Margaret Woodward, a New Orleans lawyer who had argued the Louisiana case for PETA from the beginning.

The evidence that Woodward compiled included depositions from William Raub, Mortimer Mishkin, and Joseph Brady, the I.B.R. board chairman. Mishkin told of a weekend retreat at his Bethesda home where scientists sympathetic with the plan to sacrifice the monkeys drafted the outline of an experiment. Raub, Mishkin, and Brady all testified that private money (probably from pharmaceutical companies and professional medical societies) was raised to perform the experiment. Woodward's

memorandum notes, "Dr. Mishkin honestly stated that he was unaware of any other instance when an experiment was funded in the manner of the Silver Spring monkeys experiments." Private funding enabled the scientists to bypass the required N.I.H. peer review for their plan.

The depositions also revealed that at an early point Raub had decreed that the "experiment" was not an experiment. When he presented the plan to Congress, he had termed the experiment a "plan for euthanasia and associated data acquisition."

In addition, Woodward acquired statements from several neurologists questioning the scientific worth of the results of the "experiment." Dr. Daniel Robinson, then the chairman of Georgetown University's Psychology Department and an adviser to the N.I.H. who is sympathetic to animal rights, wrote:

There are many serious, mature, and responsible scientists involved in significant neurological research. The experiment involving the Silver Spring monkeys is an insult to them, quite apart from the physical mutilations being inflicted on these innocent creatures. If the history of the Silver Spring monkeys never existed and there simply happened to be four or five available macaques for whom this experiment was proposed, it could not and would not have been approved at N.I.H. or anywhere else under commonly accepted scientific standards applied to the review of scientific proposals.

Edward Taub himself was suspicious of the conduct of the N.I.H. regarding the experiment. He found its results fascinating, but after discussions with Mishkin and Pons, he learned that they had "moved heaven and earth to try to get Raub to let them take more time" for it but had been refused.

The only monkey that Taub experimented on who is still alive is Nero, whose deafferented arm was amputated because of an infection, in 1981, at the time of Taub's first trial; he remains at Tulane. Sarah, the female rhesus macaque, was resocialized, and lives with other monkeys at Tulane; she was not relocated to Moorpark College, because, in Raub's opinion, Moorpark lacked "adequate security." (The F.B.I. recently told the director of the Tulane Primate Center that in searching a PETA volunteer's home, they had uncovered plans for a break-in at the center, possibly intended to free the monkeys.) Nero, although he is said to be in good health, has never been resocialized. When Nero dies, Pons and Mishkin are hoping to remove the thalamus from his brain and study it.

AND how has Edward Taub fared? Better than his monkeys. In 1983, he was awarded a fellowship by the Guggenheim Foundation, to enable him to write up the results of the experiments that were interrupted by the police raid on his Silver Spring lab and the N.I.H.'s termination of his grant. In 1986, he became a professor of psychology at the University of Alabama at Birmingham. He has tenure, and owns a

sprawling ranch house, on the top of a ridge in a suburb of Birmingham, that is surrounded by trees and a yard landscaped with roses.

One recent weekend, I visited Taub at his office, on the first floor of Campbell Hall, a sprawling brick building that houses the Psychology Department and its classrooms. Taub's office looks like any other office except for a large warning posted on the door:

Controlled Entrance: Use of This Door When Locked and Anytime During Evenings and Weekends Will Notify Police.

Taub is sixty-one years old now, but his hair is black, greying only at the sides. His blond wood Danish-modern desk looks almost exactly like the one in the widely circulated PETA photograph of his office in the Silver Spring lab – the photograph that shows a monkey's hand sitting on top of a pile of papers. On this desk are a number of figurines, including a little statue of Don Quixote brandishing his sword. Last November, Taub received a \$25,000 grant from U.A.B. to work with stroke victims in overcoming what he calls "learned non-use." Taub says this work derives from his experiments on the Silver Spring monkeys; he restrains a stroke victim's unimpaired arm and trains the limb in which sensation has been lost. He says his technique has "the potential to help millions of people."

Taub can spend the better part of an hour spinning a theory about the origin of the animal-rights movement, dropping names from the Luddites to Alvin Toffler, and time for him stands still while he speculates darkly on the forces arrayed against him. He compares animal activists to Nazis: "Nazis were very kind to animals. One of the first things Hitler did was rule out the use of animals in research. Hitler was a vegetarian, and he loved his dog. Göring had a sign on his wall. It said "Who Harms an Animal Harms the German Reich.'

Later, we went to his home, where we viewed a widely distributed PETA videotape on the Silver Spring monkeys, which made charges against Taub that he wanted to counter. The videotape, narrated by Alex Pacheco, features a number of still photographs, some that Pacheco took on his nightly forays into the lab and others that he removed from Taub's own files. Taub sat in an easy chair in his wife's basement music room with the notes for a talk he had given to his university colleagues in which he outlined some seventy "lies and distortions" in the videotape. He froze the frame as each new photograph appeared, and expatiated on it from his notes: what Pacheco described as mold on a pile of excrement was actually Neosporin, an antibiotic powder; the monkey Pacheco claimed had gangrene did not; what Pacheco claimed were instruments to deliver electric shock were actually timing devices; the old refrigerator in which, according to Pacheco, monkeys were confined was a Foringer chair, a standard piece of laboratory equipment; the outdated medicines hadn't been used in years. Taub has charged that many of Pacheco's photos were "staged" – that Pacheco must have deliberately "chaired" a monkey

incorrectly and then threatened it to elicit terrified reactions – and insists that Pacheco has even admitted staging some photographs. But PETA sued on *Washingtonian* magazine for libel after it ran an article suggesting that Pacheco had admitted staging his photos; the magazine later issued a correction and an apology. One of the photographs that Taub paused to discuss showed the cage of the monkey named Paul. In the foreground, Paul sits clutching his reddened, bandaged arm, in evident discomfort. Behind him, some of the wires of his rusty cage are broken. The voice of Alex Pacheco says, “His hand is swollen at least twice its normal size.” “O.K.,” Taub said. “I see two broken wires. They’re not protruding into the cage. I don’t think that’s particularly dangerous. Why are they broken? It happens. We had wire cutters, and every morning we’d go through and look for protruding wires and cut them off.”

I asked why the cages weren’t replaced.

“We didn’t have the money to replace them. It would have cost twenty-five thousand dollars. As far as Paul having subs of fingers, it’s not pretty. But it’s standard.”

Taub’s tone of righteous indignation never wavered. Over and over, he pointed out that what he had done was “within regulation,” and he claimed that his lab was in better condition than labs he knew of at the N.I.H. and at Walter Reed Hospital. “We had rodents, we had cockroaches, but we had less than I witnessed at Walter Reed. The conditions at N.I.H. were no better and in some cases were worse than at I.B.R.” At a photograph that Pacheco identified as a pile of excrement on the lab floor, Taub froze the screen, stopped, and stared at me. “You’re sitting there with a look of disgust on your face, but you’ve never been in a lab,” he said. I was surprised at his statement. Having previously studied the videotape a number of times, I was past being shocked by the images. “Any monkey lab that you go into is dirty,” he went on. “Monkeys are vegetarians – their stool is soft. You can’t think of a monkey laboratory in terms of your kitchen. If feces upset you, then you don’t want to visit a monkey lab, because there’s lot of it. You get used to it. The monkey comes out of the cage, defecates, you push it over to one side of the colony and clean it up at the end of the day. It’s standard practice – or it was. It’s probably changed, because of the fuss that’s been made by the animal-rights people. Labs have become like concentration camps or prisons, where people constantly look over their shoulder to see who’s watching. The feces you see there could have easily accumulated in one day. Laymen don’t like looking at feces.”

Then something happened that eased the tension. While Taub was talking, his cat, a beautiful golden Abyssinian, ran into the room. The cat’s name is Radamès, after a character in “Aida”, and is the latest in a series of pedigreed cats – Siamese, Burmese, and Abyssinian – that Taub and his wife have owned. I had once asked Taub how the Silver Spring monkeys acquired their unusual names. “The kids in my

lab named some of them – Big Boy, Adidas”, he told me. “I thought the names weren’t dignified enough. I named some after the Roman emperors – The Claudians. Of course, not all were Claudians; Domitian, for example, was a little later.”

I asked Taub how he would describe the state of mind of his monkeys. Had they been content? He referred to one of the first images on the tape, a picture of the monkey Domitian propping himself uncertainly on the floor with his deafferented arm – his good arm was restrained by a bandage – and looking, at least to a layman, miserable. “That is not a sad monkey,” Taub said. “A monkey isn’t a human being, and the expressions on a monkey’s face are not interpretable in the same way as the expression on the face of a human being. Both Pacheco and Newkirk have had experience with monkeys, and they know that that expression was not sadness. In one of the other photos they always point to, the expression on the monkey’s face looks forlorn – if that monkey were a human being, you’d say he was sad – but that expression is not plaintive. That’s a monkey before he’s going to be fed. He purses out his lips and goes ‘*woo woo woo*.’”

I asked what kept his monkeys from being depressed.

“They had each other,” he said.

“Weren’t they all in separate cages?” I asked.

“But they could see each other,” he said.

IN the eleven years since Alex Pacheco went to the police with his pictures of Edward Taub’s lab, PETA has grown to dominate the animal-rights movement. It is now a national organization, with more than four hundred thousand members and an annual budget of ten million dollars. Its offices are in Rockville, Maryland, five miles north of the N.I.H. Alex Pacheco is PETA’s president, and Ingrid Newkirk is its national director. PETA’s funding is modest compared with that of large environmental organizations like the Sierra Club (which has a budget of fifty million dollars) and the Nature Conservancy (a hundred and fifteen million), but in the animal-rights movement, where dozens of small, eccentric organizations subsist on shoestring budgets, PETA is the biggest kid on the block. Ninety per cent of its money comes from donations and the rest from the sale of merchandise. PETA’s size and influence allow it to control the rhetoric of the animal-rights movement. PETA, for its part, has engendered an uninterrupted stream of features, articles, television coverage, and editorial commentary by organizing colourful demonstrations and putting on fund-raising dinners attended by celebrities; by making outrageous, provocative statements to the press; and by letting no sympathetic coverage of its pro-meat, pro-fur, or pro-research opposition go unanswered by a letter to the editor or an op-ed piece. PETA demonstrators have dressed as the souls of dead animals and as doctors in white lab coats stained with bloody handprints.

Successful though these devices are in drawing attention to PETA's causes, they also invite ridicule and outrage and lay the organization open to the charge that less confrontational animal-rights groups are more effective. The Animal Legal Defense Fund, a California-based group of animal-rights lawyers, has quietly and steadily been winning rights for animals in the courts. Last year, they won a federal case that will mandate the revision of the Animal Welfare Act to include birds, rats, and mice; in February, they won a suit that will require stricter controls on the laboratory use of dogs and primates.

Critics of the movement almost invariably discuss Ingrid Newkirk and her uncompromising pronouncements on the relationship between human beings and animals. In particular, one statement of hers has been repeated incessantly in coverage of the animal-rights movement. "When it comes to feelings like pain, hunger, and thirst, a rat is a pig is a dog is a boy," she told *Washingtonian* in.....

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