RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Fetal Tissue Ban Taken to Court

Five organizations have filed suit against the federal government in an effort to overturn the Bush Administration's ban on funding transplantation studies that use tissue from aborted fetuses.

"We hoped the matter could be solved legislatively," says Leslie Goode of the Association of American Medical Colleges (AAMC), one of the plaintiffs. But in June, the House failed to override the president's veto of legislation to lift the ban. Senators Henry Waxman (D–NY) and Edward Kennedy (D–MA) crafted an alternative bill, but Senate opponents blocked it from being taken up before Congress adjourned.

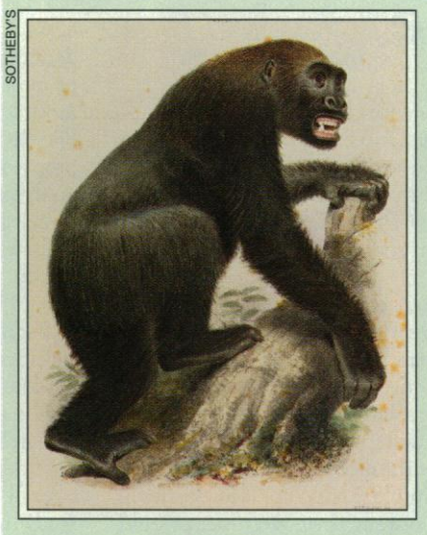
The suit was filed on 21 October by the AAMC, the Association of American Universities, the United Parkinson Foundation, the Parkinson's Disease Foundation, and the Juvenile Diabetes Foundation International.

Burkitt and Beckman Receive Bower Awards

The "richest prize in American science"—the $373,000 Bower award—is going this year to Denis P. Burkitt, 81, for his discovery of the virus responsible for what is now known as Burkitt's lymphoma. The discovery, made while he was in Uganda after World War II, triggered "an explosion of research," according to the Franklin Institute in Philadelphia, which administers the awards. After Burkitt returned to Britain in the late '60s as a member of the Medical Research Council, he went on to become a leader in the movement to increase dietary fiber.

Denis P. Burkitt

A second Bower award—but one with no money attached—will go to Arnold Beckman, founder of Beckman Instruments and of the Arnold and Mabel Beckman Foundation, in honor of his business leadership.



SOTHEBY'S

Ape on the Block

Richard Owen's *Memoir on the Gorilla*, published in 1865, is part of "the most comprehensive private collection of books relating to Darwin and his colleagues," says Sotheby's auction house. The book, from which this illustration is taken, will be auctioned off on 11 December in London along with other items from the collection of California scientific book dealer Jeremy Norman. The collection is valued at up to $400,000. The Owen book carries the additional distinction of having been a presentation copy to Charles Dickens.

Does TV Stunt Neural Development?

Parents and teachers have long been convinced that all the TV kids watch—about 22,000 hours by the time they finish high school—rots their brains. But could this be close to the truth?

Research has shown that heavy viewers know less, read worse, and have poorer imaginations. But some people have become attracted to the notion that heavy viewing may actually affect brain development in young children—specifically, by contributing to the so-called epidemic of Attention Deficit Disorder, which is associated with impaired learning and antisocial behavior. So, early this month, the Administration for Children and Families of the Department of Health and Human Services assembled some scientists to talk about the possibility.

It became clear at the conference that such research is difficult indeed. As psychologist Jane Holmes Bernstein of Harvard's Children's Hospital noted, how TV affects an individual depends on how he or she interacts with the medium. And who's to judge whether Carl Sagan elicits a better quality of neural activity than Elmer Fudd?

Besides, said psychologist Daniel Anderson of the University of Massachusetts, Amherst, the popular image of the couch potato doesn't fit children's viewing behavior. Studies have shown that kids are usually doing other things at the same time, and attention is intermittent—they watch only when the content is interesting and comprehensible. Said Anderson: "There is nothing to suggest that attention to TV is qualitatively different from attention to other media."

The biologically oriented researchers at the gathering weren't able to come up with any mechanisms by which TV viewing might stunt brain development. Perhaps, suggested Bernstein, some children are "electrically vulnerable" to TV. Or, as brain wave researcher Sidney J. Segalowitz of Brock University in Ontario put it: Massive TV viewing might add "one more burden" to a child who is weak in brain functions like "self-monitoring."

Psychologist Richard Haier of the University of California, Irvine, who uses PET scans to map cognitive activity, expressed doubt that physiological effects of chronic TV exposure could be measured. To come up with a usable theory, he noted, scientists would have to define the "neurophysiology of attention to TV," and to control for slippery factors like "intensity of concentration."

Wade Horn, head of the agency sponsoring the conference, ended with a plea: What should funders fund to answer these questions? Segalowitz said children should be taught to "control their own attentional processes." In other words, turn the thing off.

Panel Nixes Congo Trials as AIDS Source

The jury's in: No one yet knows the origin of AIDS.

You thought it was ever thus? In its 19 March 1992 issue, *Rolling Stone* magazine captured a portion of the public's imagination by suggesting that an oral polio vaccine made by virologist Hilary Koprowski, former director of the Wistar Institute in Philadelphia, might have been contaminated by a monkey virus that mutated into HIV-1, the most common form of the human AIDS virus. In the scientific community, a split quickly appeared: One camp guffawed (*Science*, 20 March, p. 1505), but a few scientists stressed that the notion was not beyond the realm of possibility.

Now an independent six-member committee convened by Wistar has concluded in a 22 October report that the probability of AIDS originating from polio vaccine trials held in the Congo in 1957 is "extremely low." The new report dispassionately examines that possibility in detail, even noting that the "timing of these clinical trials, and the general belief that HIV appeared first in central Africa, lends superficial support to this hypothesis." But in the end, the committee, headed by Claudio Basilico of the New York University School of Medicine, concludes that each step in this putative route of transmission "is problematic."

Then comes the putative coup de grâce: The committee points to the earliest HIV-1 case yet reported, that of a Manchester sailor in the merchant marine who returned to England from a trip to Gibraltar and North Africa in

early 1957 and developed symptomatic AIDS the following year. Since this was just before the Congo trials began—in late 1957—"it can be stated with almost complete certainty that the large polio vaccine trial...was not the origin of AIDS," states the report.

A thorough search of Wistar freezers did turn up one sample of what might have been polio vaccine used in the Congo trials, and the committee report precisely details how to test it for HIV or its simian cousin, SIV. But the researchers were "pessimistic that such testing, even if performed by the best labs using the most appropriate techniques, will produce conclusive results."

Good News on Mammograms

A report in the latest issue of the *Lancet* may help lay to rest the controversy over whether women in their forties should have annual mammograms. In a study of 1045 women under 50 who had been diagnosed with breast cancer, Adam Stacey-Clear and colleagues from Harvard and Massachusetts General Hospital found higher survival rates among those whose cancers had been detected by mammograms.

Earlier this year, news reports from the (as yet unpublished) National Canadian Breast Screening Survey raised the possibility that annual mammograms actually increase breast cancer mortality in the 40 to 50 age group (*Science*, 22 May, p. 1128).

But the Massachusetts researchers found that among the women whose cancers were detected by mammogram alone, the 5-year survival rate was 95%—compared with 74% among those with cancers detectable by physical examination. The researchers say their results "contradict" the suggestion that mammography may shorten survival for women under 50 and "casts doubt" on data that indicate the practice shows no benefit.

The researchers contend that "investigators who have reported negative results in this age group must examine other causes for their results." They suggest the main cause may be poor-quality mammography leading to false negatives—which may give a woman "false reassurance" even when she notices breast changes subsequent to a negative mammogram.

Physicists Petition Chinese

Some 360 U.S.-based physicists have signed a statement urging the Chinese government to release prodemocracy activists imprisoned after the June 1989 Tiananmen crackdown. In particular, they seek the release of physicist Liu Gang, 30, an organizer of the "democracy salons" that started on the campus of Beijing University. Liu has reportedly been tortured and subjected to solitary confinement.

The petition, generated by the American Physical Society (APS) and the 2-year-old Committee to End the Chinese Gulag, is part of what Herman Winick, chairman of the APS's Committee on the International Freedom of Scientists, calls a "growing movement" among scientists (*Science*, 12 June, p. 1514). At two big meetings held in Beijing last summer—the 21st International Conference on the Physics of Semiconductors and the 19th International Congress on Entomology—a number of scientists signed petitions, dedicated papers to imprisoned colleagues, and attempted to raise human rights issues with government officials.

But why would scientists hold meetings in a nation that jails their peers on political grounds? Richard Dicker, director of the gulag committee, thinks that "not to take human rights into consideration is either naive or insensitive," but he points out that not everyone agrees. Dicker says that the International Union of Pure and Applied Physics was urged to build concerns about freedom of scientific inquiry into the format of the semiconductor meeting, but the organizers felt it was sufficient to assure concerned scientists that the meeting "should in no way be interpreted as an affirmation" of Chinese government policies.

Fetal Alcohol Syndrome

In France, drinking is a national pastime: In 1990, only the heavy-drinking citizens of the former East Germany beat out the French, who each consume, on average, 12.6 liters a year of pure alcohol.

Now it seems the ominous toll on younger generations is becoming increasingly apparent. A French researcher, who says his results point to what amounts to a "national calamity," has supplied new evidence that a fetus's exposure to alcohol in the womb can lead to long-term consequences for the child.

Physician Paul Lemoine has just completed a follow-up to a landmark 1968 study in which he became the first to describe what was later dubbed fetal alcohol syndrome (FAS). Lemoine's new study, of 77 of his former patients and 28 other FAS victims, supplies the most abundant evidence to date that severe cases of FAS have long-term effects, particularly mental retardation, along with other problems such as hyperactivity and depression. Furthermore, some children not originally diagnosed as suffering from FAS also seem to be affected. When Lemoine looked at 16 brothers and sisters of FAS patients, he found that 14 of them had disturbed psychological profiles even though they appeared normal at birth.

Sins of the mothers. The first baby in the world diagnosed at birth with Fetal Alcohol Syndrome. Shown in infancy and at age 14, he is among the most handicapped of FAS children with a small head, hyperactivity, and an IQ of 40.

The report, published in the *Annales de Pédiatrie*, confirms findings from a smaller study of 61 adolescents and adults, published last year in the *Journal of the American Medical Association* by Ann Streissguth and colleagues at the University of Washington Medical School in Seattle. "These are the first reports that have actually followed [FAS] cases over a long period of time," says Kenneth Warren of the National Institute on Alcohol Abuse and Alcoholism. They demonstrate that "in the more severe cases of FAS, the deficits persist."

Nutritional Map of the Brain

Most animals know how to take care of themselves. Deprive laboratory rats or monkeys of key elements in their diets, and they can learn to choose meals that make up for the deficiencies if given the chance. But how exactly do they make the right connections?

Nutrition scientist Kunio Torii of Ajinomoto, a large food company in Yokohama, has implanted sensors in the rats' brains that do not impede their movement, thus allowing him to pinpoint those neurons in the rat hypothalamus that respond to specific dietary deficiencies, such as shortages of the amino acid lysine. This, he told *Science*, is a first step toward "developing a nutritional map of the brain." And, he hopes, the research may lead to new treatments for diet-related diseases, including hypertension and diabetes. Torii's work, to be published in a forthcoming issue of the *Journal of Physiology and Behavior*, is being funded by $16 million from the Japanese government.