RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Etheric Archives

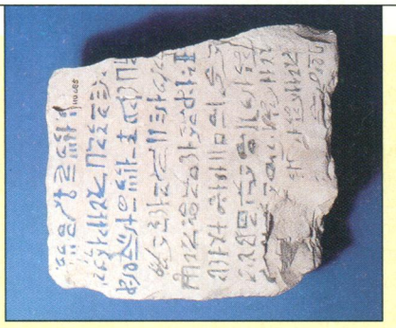
Los Alamos physicist Paul Ginsparg and his "e-print archives"—long adrift in the horse latitudes of the federal grant picture—are finally funded. The archives, an array of electronic bulletin boards where thousands of scientists post and read research preprints, have been around since 1991. Unable to find a sponsor, the project subsisted on next to nothing even as it became an increasingly important resource for scientists (*Science*, 11 November 1994, p. 967).

The National Science Foundation (NSF) has come to the rescue. Last week it awarded Ginsparg and Los Alamos colleagues Geoffrey West, Erica Jan, and David Forslund $1,069,000 to upgrade and extend the popular archives.

As a place where unpublished papers can be posted and read in up-to-the-minute fashion (at http://xxx.lanl.gov), the archive is in hot demand by researchers ranging from physicists to cognitive scientists. First intended just for users in Ginsparg's own field of high-energy particle theory, the archives are now processing more than 45,000 transactions a day by some 20,000 subscribers. Preprints are accepted in some 25 disciplines including many fields of physics, economics, astrophysics, and mathematics.

The grant, from the new Office of Multidisciplinary Activities in NSF's math and physical sciences directorate, will now enable the archives to expand from a one-man "cottage industry"—Ginsparg and his computer—into an operation featuring two full-time computer experts and offering the latest in electronic publishing. It will now also be possible to develop an on-line peer-review process that will reflect "more closely the way research actually operates," says Ginsparg.

Print journals, meanwhile, are playing catch up. The American Physical Society plans to take its *Physical Review Letters* on-line this summer. And last week the British Institute of Physics announced plans to offer the letters published in its journals electronically. But Ginsparg thinks these efforts are beginning to look antediluvian, merely "electronic clone[s] of the static paper medium."



Early real-estate dispute. Hieratic text incised in limestone.

COURTESY OF THE ASHMOLEAN MUSEUM, OXFORD

Notes From the Valley of Kings

If you've ever wanted to know how ancient Egyptians did their laundry, a new book of translated "ostraca" may be just what you need.

Ostraca are a special family of artifacts—notes made by the ancients on shards of pottery or, in the case of Egypt, limestone. About 30,000 have been dug up in the Valley of the Kings on the Nile, inscribed by artists and artisans living in a "workers' village" at Thebes as they went about building and decorating tombs for the royals 3000 years ago.

Scholars are still translating these tablets, described by James Allen, Egyptologist at New York's Metropolitan Museum of Art, as "the major source of information about daily life and economics in the New Kingdom." Now, a selection of ostraca and the information they bear may find an audience beyond the small cadre of scholars who have been studying them since they were dug up in the 1930s, '40s, and '50s. Andrea McDowell, assistant professor of Near Eastern studies at Johns Hopkins University, is preparing a book, called *Laundry Lists and Love Songs*, that will contain the complete texts from selected ostraca so people can have "the thrill of reading the texts directly." Included in the book will be ostracon 655 (above). McDowell, who studies what these tablets reveal about legal affairs in the New Kingdom, is about to publish her translation of the tablet, held by the Ashmolean Museum at Oxford, in the *Journal of Egyptian Archeology*. The document, incised in the limestone (most are written in ink), carries an account of a dispute about the ownership of a hut.

Help for E.T. Search

Those legislators pushing for privatization of U.S. government functions couldn't ask for better supporting evidence than the fate of the Search for Extraterrestrial Intelligence. The search, or SETI, was cut from the budget of the National Aeronautics and Space Administration (NASA) in 1993, and is now carrying on under private financing.

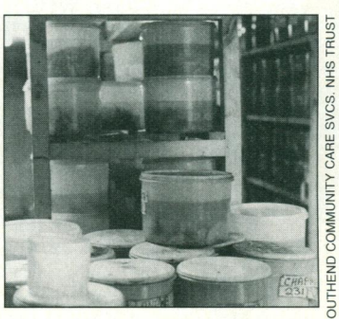
The two main branches of the search are headquartered at Harvard University and in Mountain View, California. Just last month, the Harvard search, run by The Planetary Society, received a donation of computer memory chips, worth $100,000, that will raise its search capability 1000-fold. Micron Technology Inc. is giving the chips contingent on the society's ability to raise an equal amount in matching funds. Paul Horowitz, director of the BETA (for Billion Channel Extraterrestrial Assay) project at the Harvard-Smithsonian radio telescope, says "if past support is any measure," the society will have little difficulty matching the gift, which "will allow us to complete" a quarter-billion-channel radio spectrum analyzer. The analyzer will be used to digest information coming in from a telescope that for the past 10 years has been devoted full-time to scanning the northern sky for signs of intelligent life in the Milky Way.

The BETA project is complementary to the other main ongoing search, Project Phoenix, run in Mountain View by the private SETI Institute, which took over half of the search NASA dropped. Phoenix, with a 56-million-channel receiver, is conducting a sophisticated targeted search for signals from nearby sunlike stars, currently using the Parkes radio telescope in Australia. Astronomer Frank Drake, president of the SETI Institute in Pasadena, California, says SETI doesn't miss the ups and downs of government funding. The current dream is to set up an endowment and live off the income. Drake says "we're confident" the support can be found. SETI supporters "know we haven't done nearly enough searching yet."

Brain Trust

Tucked away in Wickford, Essex, in southeast England, at the Runwell Psychiatric Hospital, is the world's biggest archive of human brains. Existing in obscurity for 45 years, the assemblage of some 8000 specimens is now to be made accessible to researchers around the world.

The collection was established at Runwell in 1950 by the late neuropathologist Nick Corsellis, who set up the hospital's pathology department. "The collection is predominantly psychiatric, with all forms of mental disease represented," says curator and neuropathologist Clive Bruton. The frozen, formalin-fixed and paraffin-blocked samples include brains of patients with Alzheim-



Old brains for modern science. Brain trove piled in bomb shelter.

SOUTHEND COMMUNITY CARE SVCS. NHS TRUST

er's, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, and rare neurological conditions such as Pick's disease and cerebral syphilis. There are also many samples with head injuries from boxing, which formed the basis of Corsellis's 1973 study "The Aftermath of Boxing."

In 1985, when the department was threatened with closure, the Medical Research Council (MRC) stepped in to manage the collection, much of it housed helter-skelter in an old concrete air-raid shelter. After a systematic survey in 1994, the MRC's Brain Bank Review Committee found that only half the brains had sufficient documentation to be useful for research and recommended the collection be split up according to disease and sent to 11 different research institutions.

However, now the brains will all stay together. The Southend Community Care Services NHS Trust, which manages Runwell Hospital, plans to assume stewardship. The MRC had to go along because "the clinical notes, which are essential for scientific interpretation, are owned by the Trust," says the MRC's Peter Dukes.

The Trust now plans to make the collection available to scientists around the world. "The material is invaluable," says neurochemist Gavin Reynolds of the University of Sheffield. Particularly prized are brains from schizophrenic patients who were never given antipsychotic drugs. Glass slides will be mailed out on request. The catalog of specimens will soon be available on the Internet, and clinical notes will be added later.

Bass Poachers Hooked by Bug

With the aid of transponders intended for tracking the distribution of game fish, Maryland officials believe they have nailed a major bass-poaching ring.

The hero of the successful law enforcement effort is what's known as a PIT tag—for passive integrated transponder—a 9-millimeter-long electronic device that signals its presence when activated by a scanner. The scanner then reads out a number which enables officials to look up when and where the fish was tagged.

Maryland fisheries biologists placed PITs into about 3000 largemouth bass, which have made a spectacular comeback in the Potomac River after years of scarcity, to see how local fishing tournaments were affecting distribution of the fish, which are still a protected species. It is illegal, in fact, to sell wild-caught bass. But according to a report in the *Washington Post*, 2 years ago Canadian customs officials noticed that live bass were being shipped to Ontario that were not uniform or light enough in appearance to look like captive-bred fish. Maryland officials began investigating the shipper, a Maryland aquaculture farmer named Dennis Patrick Woodruff, whose bass ponds are near the Potomac. "Someone got the idea to go ahead and see if any of these bass had our tags in them," says Mel Beaven, a biologist with the Maryland fisheries department.

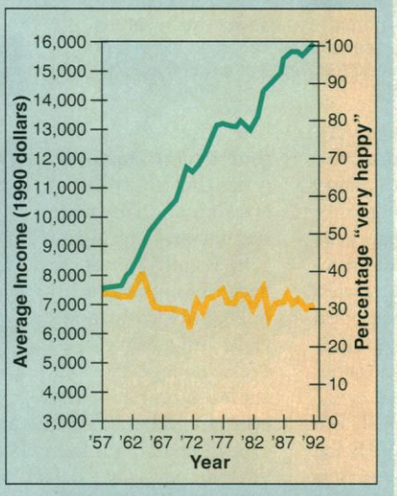
Indeed, some of them did. Woodruff and three colleagues were indicted by a grand jury on 15 February and charged with the illegal sale of about $150,000 worth of bass.

Has this tale of technology harnessed in the cause of justice inspired more interest in the tags? Maybe, says Beaven: "I had an electrician call me this morning" looking for a nondetectable way of tagging his cables.

Money Isn't Everything

While few people would quibble with the adage that money can't buy happiness, "we certainly have the idea that a *little* more money could make us a *little* happier," says psychologist David Myers of Hope College in Holland, Michigan. But apparently that's not so in affluent countries, where, says Myers, "economic growth has provided no apparent boost to human morale." Witness the chart below, which appears in an article in the January issue of *Psychological Science*, authored by Myers and his colleague Ed Diener of the University of Illinois, Champaign. Once a nation has reached a certain level of material well-being, the duo reports, more wealth doesn't add to people's subjective well-being (SWB). They define SWB as "frequent positive affect, infrequent negative affect, and a global sense of satisfaction with life."

Economist Richard Easterlin of the University of Southern California, another SWB researcher, says "Japan is far and away the most interesting" illustration of this principle. In the late 1950s, Japanese per capita income was 1/8 that of the United States. Now it is 7/8. Yet there has been "no change in the level of [Japanese] happiness over that period."



Feeling good. U.S. per capita income goes up up up from 1957–93; "very happy" portion of populace hovers around 30%.

Happiness researchers agree that the real ingredients for a contented soul have to do with inner resources and personal relationships. Yet young people are straying ever further from these values, says Myers. He says an annual survey by the American Council on Education and the University of California, Los Angeles, shows that 75% of entering collegians agree that it is "very important" or "essential" that they be "very well-off financially"—ranking that goal even above "raising a family." In 1970, only 39% of entering collegians felt that way. At the same time, the number who felt it very important or essential to "develop a meaningful philosophy of life" plummeted from 76% to 43%.

Mme. Curie Arrives

The first woman to teach at the Sorbonne in Paris, Nobelist Marie Curie, is now the first woman whose achievements entitle her to rest in the city's Panthéon, the tomb that honors France's "great men." President François Mitterand, fulfilling a promise made a year ago, last week signed a decree authorizing the transfer of the remains of Marie and her husband Pierre.

The Panthéon, a domed monument in the Latin Quarter, is just around the corner from the institute bearing the name of the Curies, whose research on radiation earned them the 1903 Nobel prize in physics. One woman, Sophie Berthelot, does already occupy a place in the monument, but she rode in on the coattails of her husband, chemist and politician Marcellin Berthelot, who died in the same year (1907).

Although Marie Curie had two Nobels—having won the 1911 chemistry prize after her husband's death—she was denied entry into the Academy of Sciences. Curie (also in Book Reviews this week, p. 1842) will now rest in more exclusive company: The Panthéon has been achieved by only two Academy members—Berthelot and Pierre Curie.