

Briefings

edited by CONSTANCE HOLDEN

Right Handers Live Longer

Left-handed people are less fit in the struggle for survival, say two researchers who have been investigating why the proportion of left-handers in the population diminishes from about 15% at age 10 to close to zero by age 80. In what they admit is a "somewhat radical and macabre hypothesis," psychologists Stanley Coren of the University of British Columbia and Diane F. Halpern of California State University propose that the reason elderly left-handers are hard to find is that most are dead.

The researchers tested the theory 2 years ago with statistics on dead baseball players, and found that even in this group of (originally) highly fit males, mortality after age 33 was about 2% higher for the southpaws. Now, the researchers have reported on a study of data supplied by the relatives of 987 dead people—"the first random sample of deceased individuals in which age of death was studied as a function of hand use." The magnitude of the results, published in the January *Psychological Bulletin*, was "sur-

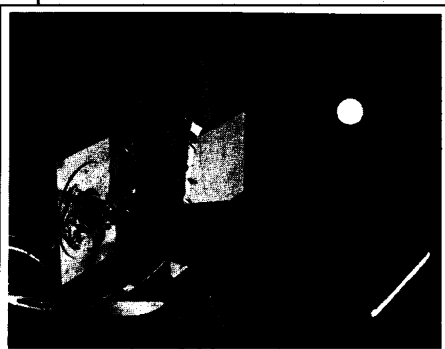
prising" even to the researchers: Right-handers outlived left-handers by an average of 9 years, a difference even greater than the gender gap in longevity (women outlive men by about 6 years).

What's the explanation? The theory that people shift to right-handedness as they age is dismissed by Coren and Halpern on the basis of historical and other data. That leaves the more sinister theory: "elimination." Some of the excess mortality stems from the hazards of coping in a "right-sided world." But although some left-handedness is "natural," the authors cite a variety of biological factors, including birth stresses, delayed development in the nervous system, and excessive doses of prenatal hormones, that can result in a change of handedness. Sinistrality is disproportionately associated with mental retardation, for example, as well as with allergies and autoimmune disorders.

The authors acknowledge "some hesitancy among researchers to accept the idea that left-handedness may be the result of, or a marker indicating the existence of, pathological factors." But southpaws can take heart: Among their legions are such hoary luminaries as Leonardo, Picasso, and four recent presidents, including George Bush.

Juggling robot. While U.S. industry lags behind Japan in the use of robots, American academia is busy at work on the next generation. Yale's juggler, currently working on getting two balls going simultaneously, has a paddle that responds to the ball's motions with the aid of two video cameras. Unlike industrial machines that don't know when they make a mistake, this one, developed by electrical engineering graduate student Al Rizzi,

operates with continuous feedback. It is one of a growing number of machines that are learning to walk, hop, run, and even playing ping-pong. Indeed, at the Massachusetts Institute of Technology, students on 5 February staged a "Robo-Pong" competition, pitting robots built from LEGO kits against each other.



Michael Marsland/Yale University

Social Scientists Get a Man at OSTP...

Presidential science adviser D. Allan Bromley has made good a promise to appoint an assistant director with responsibility for the social sciences at the White House Office of Science and Technology Policy. Bromley has chosen for the post a China scholar, Pierre Parrolle, who is currently head of the cooperative science section of the National Science Foundation's international programs.

Parrolle, who received his doctorate in political science in 1975 from Brown University, is fluent in Chinese and helped the National Academy of Sciences get its committee on scholarly communications with the People's Republic of China started in the late 1970s. He served as U.S. science counselor in Beijing from 1986-88. He has also taught at Wheaton College in Massachusetts.

According to Thomas Ratchford, associate director for policy and international affairs at OSTP, math and science education will be among Parrolle's main responsibilities. He has been detailed from NSF for a year but that's subject to renewal, says Ratchford.

...and an NSF Directorate?

Social and behavioral scientists, whose callings are often regarded as "soft" by their brethren in the natural sciences, have long yearned for more respectability in the eyes of federal funding agencies. And these days they have cause for excitement: they may be getting their very own directorate at the National Science Foundation (NSF).

Last year, congressional hearings resulted in the introduction of a bill, sponsored by Representatives Doug Walgren (D-PA) and George

Smooth Ride for Nominee

To say that Walter Massey should have no trouble being confirmed as the next director of the National Science Foundation is probably the science policy understatement of 1991. Before he even spoke at his 7 February confirmation hearings before the Senate Labor and Human Resources Committee, Massey received three fervent testimonials—from Illinois Democrats Paul Simon and Alan Dixon, and from Thad Cochran (R-MI). These prompted committee chairman Edward M. Kennedy (D-MA) to quip, "You're doing very well so far, Dr. Massey."

There were no surprises in Massey's testimony. He emphasized that NSF must provide unflagging support for academic research, while putting more into pre-college science and mathematics education. Massey, who recently took a 6-month Paris sabbatical from the University of Chicago to study Eu-

ropean research, also said that NSF could do more to promote international scientific cooperation and educational exchanges.

The Senate is expected to vote on the nomination late this month or early in March, at which time Massey will take the reins of the agency from popular acting director Fred Bernthal.

New Genome Centers

A year ago everyone was looking toward a big increase in the 1991 budget for the Center for Human Genome Research at the National Institutes of Health. But by last summer it was clear that Congress would not award the full \$108 million requested by the president, and genome center officials predicted unhappily that the new research centers slated for this year—which director James Watson envisions as linchpins of the entire mapping and sequencing effort—might be postponed indefinitely.

Not so, it turns out. Watson's office has just awarded two new

Brown (D-CA), calling for a separate Social, Economic and Psychological Sciences (SEPS) directorate. The idea has also been promoted by two NSF advisory groups, including a task force appointed by Mary Clutter, head of NSF's Biological, Behavioral, and Social Sciences Directorate.

Clutter herself and others have expressed doubts about such a reorganization, saying that it could operate to the detriment of the behavioral sciences by further isolating them from their biological underpinnings. But witnesses from a range of professional societies, testifying at hearings held by the task force last November, disagreed. "We need a distinct identity and voice to reverse the inequitable funding patterns of the last decade," said Alan Kraut of the American Psychological Society.

That argument was firmly rejected by former NSF director Erich Bloch. But several NSF officials have expressed confidence that the concept of a SEPS directorate will be considered sympathetically by NSF's new director, physicist Walter Massey. The task force is planning to issue an interim report later this month, coinciding nicely with Massey's arrival. The final report, on which Clutter will base her recommendations, is slated for 1 April.



Mary Clutter

5-year center grants, for roughly \$2 million a year each, to Thomas Caskey at Baylor College of Medicine in Houston and to Raymond White and Raymond Gesteland at the University of Utah. The Utah center will focus on developing lots of new, high-quality DNA markers for the genetic map—especially for mapping chromosomes 16, 17, and 5. The group will also collaborate with researchers at the University of Alberta on rapid methods for DNA sequencing. At Baylor, researchers will be working on a different type of map, the physical map—a collection of overlapping pieces of DNA—for the X chromosome and chromosome 17. The Baylor team also plans to build a genetic map of chromosome 6 and to sequence disease genes as they come upon them.

The centers now total six, and Elke Jordan, associate director of the genome effort at NIH, says there is room for three more this year. "We have pared them down to bare bones," explains Jordan, who estimates that each will get about \$3 million a year

rather than the \$4 million originally anticipated. The president has requested \$110.5 million for the NIH genome effort next year, which would include funds for two more centers. Tentative plans are to have fourteen in place by 1995.

Log On, Ye Clinicians

Medline, the National Library of Medicine's on-line bibliographic service, has just taken on a new role: town crier.

The National Institutes of Health has been looking for efficient ways to alert doctors about important new clinical findings before they are published (*Science*, 28 January, p. 374). So, at a meeting held last month to discuss the issue, NLM director Donald Lindberg proposed using Medline to put the news out electronically. And, yes, the idea was an instant hit.

The very next day, Medline users were greeted with an announcement from the National Institute of Child Health and Human Development that a

clinical trial testing intravenous immunoglobulin for the prevention of bacterial infections in children harboring the AIDS virus had been terminated because the therapy was clearly beneficial.

A few more scoops like this one and Medline, which has had a limited audience—there are only about 50,000 users, and only 13,000 a month log on—may prove the on-line hit of the year.

Biotech Directory

Biotechnology researchers will soon have a new tool to aid their investigations: a directory of virtually everyone in the United States doing full-time biotechnology research at an academic institution.

The project is being undertaken by the North Carolina Biotechnology Center in Research Triangle Park, North Carolina, with the help of Synergistic Technologies, Inc. It "has just taken off like crazy,"

says Mark Dibner of the center. Seven professional societies have agreed to participate in the project, some of them sending questionnaires at their own expense. The National Institutes of Health, the National Science Foundation, and the Department of Agriculture are also sending questionnaires to their grantees. Dibner says researchers will decide for themselves whether they fit the criteria, defined as anyone involved full time in "any science investigation that utilizes new cell, protein, and nucleic acid technologies such as RDNA, hybridoma/monoclonal production, protein engineering, and other related fields." That population is estimated to be about 25,000.

The first issue of the new directory, which the center hopes to update periodically, will be published next fall. Researchers can obtain questionnaires from the center at P.O. Box 13547, Research Triangle Park, NC 27709. Or they can call a USDA computer bulletin board at 1-800-624-2723.

NEW NSF S&T CENTERS

CENTER	5-YEAR BUDGET (IN MILLIONS)
Center for Light Microscope Imaging and Biotechnology Carnegie Mellon University*	\$7
Center for Light Microscope Imaging and Biotechnology Kent State University	\$9.3
Center for Advanced Liquid Crystal Optical Materials SUNY Stony Brook	\$10.1
Center for Astrophysical Research in Antarctica University of Chicago	\$13.6
Center for Ultrafast Optical Science University of Michigan	\$9.3
Center for Research in Cognitive Science University of Pennsylvania	\$9.8
Southern California Earthquake Center University of Southern California	\$13.4
Center for Synthesis, Growth and Analysis of Electronic Materials University of Texas at Austin	\$10.5
Center for Biological Timing University of Virginia	\$10.6

*Only the primary universities are named; in many cases, several other institutions or government agencies are involved.

The National Science Foundation has announced 9 of the 14 new Science and Technology Centers it intends to fund this year. The centers—NSF's strategy for supporting large-scale multidisciplinary science—were approved months ago, but the announcement was delayed after a last-minute \$40-million cut forced the agency to rethink its plans (Science, 4 January, p. 19). The figures above represent a maximum 5-year commitment—future budget cuts could change the picture. Eleven centers were funded in 1989; when the remaining 5 of this year's crop are named, the total will be 25.