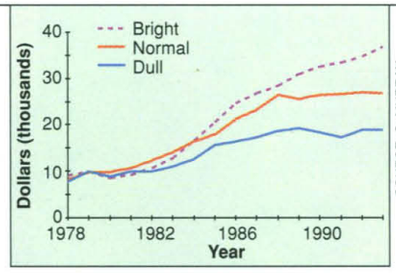
RANDOM SAMPLES

edited by CONSTANCE HOLDEN

The Power of IQ

Charles Murray, co-author of the book *The Bell Curve*, has come up with a new analysis of intelligence quotient (IQ) in siblings that he claims further supports his controversial view of an increasingly divided society—one in which the smart become ever more powerful and wealthy while the less smart find life more and more difficult. Critics such as Harvard sociologist Christopher Winship counter, however, that Murray's findings are not only not new, but fail to confirm his thesis.

Murray's analysis is based on data from the government-funded National Longitudinal Study of Youth (NLSY), which has followed more than 12,000 young people, now in their 30s, from 3000 households, since 1979. After dropping those from the lowest income families as well as families in which parents divorced early, Murray located 710 pairs of siblings in which one had a "normal" IQ (between 90 and 110) and one was either "bright" (over 110) or "dull" (under 90). He found that high IQ went with higher incomes, more education, less illegitimacy, and fewer offspring, he relates in an article in the 25 May issue of the *Sunday Times* of London.



SOURCE: C. MURRAY

Smart and rich. High-IQ sibs earn more.

Murray takes this finding and runs with it, arguing that the data "give us ample reason to conclude that no matter how successful the attempts to equalize opportunity might be, American society is going to be left with extremely large inequalities."

Sociologist Linda Gottfredson of the University of Delaware, Newark, says Murray's findings about IQ are "entirely consistent with what experts have discovered"—that it confers practical advantages. Winship says, however, that because Murray's methodology provides "no direct estimates of the effect of family background," he has failed to confirm his "much more controversial claim that IQ is the dominant cause of social and economic effects."

NIH Peacemaker

To handle disputes among researchers over such matters as reagent sharing and whose name should go first on a patent, officials at the National Institutes of Health (NIH) are trying a new solution: an ombudsman. Head of a new Cooperative Resolution Center, the ombudsman offers advice and encourages scientists to use "alternative dispute resolution" techniques to settle their differences.

Until recently, lab disputes have often landed in the lap of busy NIH intramural research deputy director Michael Gottesman. Now David Lee Robinson is on leave from running a lab at the National Eye Institute to serve as ombudsman for a yearlong test of the project that involves five of NIH's 19 institutes or centers. After several months on the job, says Robinson, "it's getting to be almost full-time."

Some observers say they like having an ombudsman but would prefer one from outside NIH's managerial ranks. Asserts Billie Mackey, president of Self Help for Equal Rights, an NIH group, "Where there's any real conflict, he will go along with the management."

Shock Therapy for Parkinson's Patients

Tiny electrical zaps to the brain may soothe the jerky movements of people with Parkinson's disease, according to a pilot study described in this month's *Nature Medicine*.

In Parkinson's, dopamine-producing cells in the brain die, prompting the globus pallidus, a deep structure that moderates activity in other regions, to become overactive. It behaves like a brake, says Andres Lozano, a neurosurgeon at Toronto Hospital. "Parkinson's patients' motions are slow, erratic, and jerky—it's like they are driving with their brakes on." Doctors may destroy the globus pallidus as a last resort.

Lozano's team instead inserted electrodes, which emitted rapidly oscillating electrical pulses into the globus pallidus of 21 patients. Using a positron emission tomography scanner to measure electrical activity, the team found increased blood flow in the premotor cortical areas—where the initiation of movement occurs—suggesting that the globus pallidus was being disabled. At the same time, the subjects' motions became quicker and more fluid. With the brakes off, the premotor areas appeared to resume normal functioning. Neurologist Mahlon DeLong of Emory University in Atlanta thinks electrode therapy may one day become an accepted treatment. "We're on a fresh wave of significant new treatments of Parkinson's and other movement disorders," he says.

Australian Cave Breakthrough

Battling cold, disorientation, and claustrophobic conditions, underwater cavers in Australia may have located the missing link between two major caves in the spectacular Jenolan Caves system, beneath the Blue Mountains west of Sydney.

For years, cavers have been looking for a route between two large caves that are linked by the small underground Jenolan River, but efforts to find the route from one, Spider Cave, ended in a gushing well too small to slip through. But divers from the Sydney University Speleological Society, using seismic and gravity probes, discovered that another cave lay under the rocks around the well. After squeezing through the rock pile, they entered the chamber and found a conduit at the bottom that led to yet another cave. There they spied a horizontal passage, which they hope will lead them to Mammoth Cave 300 meters to the north.

MARK SPENCER/SUSS

Wet frontier. Diver in underground river.

The two new chambers may offer new clues about the geological history of the 23-km-long cave system. Sydney University geologist Armstrong Osborne speculates that the original limestone was deposited some 400 million years ago by an ancient shallow sea. After the sea subsided, a river carved out the caves. At various points over the next 200 million years, the caves were filled again, either by rising seas or glacial deposits, and carved out again. The scientists plan to analyze the rocks for both marine and glacial deposits to test Osborne's theory.

The underwater caves also seem to be an oasis for rare and ancient life-forms such as syncarids, crustaceans that have escaped extinction as the surrounding habitat dried out. Says Peter Serov, a syncarid expert at the Australian Museum in Sydney, "These cave syncarids are a time capsule from prehistoric Australia."