Alcoholics as Social Drinkers: Benchmark Study Attacked as Fraud

A decade-old alcoholism treatment study, which claimed to demonstrate that the most severe alcoholics could learn through behavior modification to become social drinkers, was sharply attacked last week by researchers who say that most of the original subjects have fared disastrously in the long run. The recent reevaluation indicates 19 of 20 subjects never succeeded in controlling their drinking in the first place, a finding that contradicts two earlier follow-up studies and amounts to a charge of scientific deception.

The research was reported in the July 9 SCIENCE by three scientists — psychologist Mary L. Pendery of the San Diego Veterans Administration Medical Center, psychologist Irving M. Maltzman of the University of California in Los Angeles, and psychiatrist L. Jolyon West, also of UCLA. Their examination of official hospital and court records, coupled with new interviews, shows that none of the subjects trained to be social drinkers actually succeeded during the first six months and that the majority were rehospitalized within a year for alcoholism treatment.

Only one has become a successful social drinker after 10 years. Of the other 19 subjects, the researchers report, eight continued to drink excessively after 10 years; six had become abstinent; four had died of alcohol-related causes; and one, a certified alcoholic, had vanished.

The original study, conducted by psychologists Mark B. Sobell and Linda C. Sobell at Patton State Hospital in California, used aversive therapy in a simulated barroom to teach so-called *gamma* alcoholics — alcoholics suffering from extreme physical dependence — to moderate their drinking. The Sobells claimed to show, based on a two-year follow-up study, that these subjects were statistically more successful in avoiding subsequent alcoholism than were controls who attempted to abstain from drink completely. The Sobells' findings, which attracted considerable attention and controversy when released, were subsequently confirmed in an independent third-year follow-up conducted by psychologist Glenn R. Caddy, who worked (as did the Sobells) at nearby Orange County Mental Health Service at the time.

The recent study takes issue with the methods and conclusions of both earlier investigations. According to Pendery, the Sobells' research was skewed from the start because of numerous biases in assigning subjects and controls; subjects in the moderate-drinking program were admitted to Patton predominantly in the spring and summer, for example, while controls were admitted in the fall and winter months, when many transient alcoholics are attracted to Southern California. Furthermore, much of the extensive follow-up interviewing described by the Sobells was not conducted, Pendery told SCIENCE NEWS, and the data that were collected were misinterpreted to favor the moderate-drinking subjects. Where the Sobells interpreted rehospitalization episodes as positive attempts to curb or avoid drinking, for example, their critics say that rehospitalizations were early indicators of the subjects' repeated failure to drink socially. The Sobells, who now work at the Addiction Research Foundation in Toronto, have refused to discuss the new findings; through their attorney, they have indicated that they stand by their original findings. At the Sobells' request, the ARF has set up an external review committee, which will examine the integrity of the original research.

The new findings also call into question the independent follow up by Caddy. Through interviews with subjects and controls in 1974, Caddy had confirmed the Sobells' general finding and had reported that half the subjects were doing well 100 percent of the time. Pendery reports in contrast that several of these reportedly successful social drinkers were actually experiencing severe problems with alcohol during this time, according to official records and interviews with witnesses. The absolutely contradictory findings of the two independent reevaluations — Caddy's and Pendery's — are curious in light of their histories. From the start, Pendery says, the Sobells resisted Pendery's plan for a reexamination of their data, refusing to supply a list of subjects' names and tying the project up in legal proceedings. In contrast, the Sobells sanctioned the Caddy study and encouraged subjects to participate.

Caddy, now at Nova University in Fort Lauderdale, Fla., concedes that he was working with the Sobells' approval, but he insists that they were in no way involved in the actual research. He had not seen the SCIENCE report and would not comment on Pendery's data, but he did express surprise that the Sobells' research is still, a decade later, the focus of attention. The Sobells' study, he says, was a clinical evaluation of a particular therapy that offered controlled drinking as one alternative goal. "Some people succeeded in restricting their drinking, others abstained, and others blew it, but the point is that statistically speaking those in the restricted drinking strategy did better than those in the traditional approach."

It is precisely this statistical superiority that the new data call into question, Pendery says. The original data are "fantastic," she says, and if they are accurate then every alcoholism treatment program should be redesigned according to the Sobells' model. "But if the Sobells didn't find what they say they found, then their study should be considered a dangerous deception." Although many clinicians have remained skeptical about the Sobells' findings, she says, the study had "enormous impact" on students — students who are now entering clinical practice with the idea that severe skid-row alcoholics can be taught to be social drinkers. In addition, Pendery says, patients themselves have become aware of the Sobells' claims and have requested training in social drinking — a goal that, her 10-year follow up shows, is unreachable for most severely depleted alcoholics. —*W. Herbert*

The space shuttle: Rites of passage

Among the numerous ceremonies held around the country on the Fourth of July, perhaps the best attended was the graduation exercise of the space shuttle, with more than half a million people gathered for the occasion and the President himself on hand to give the commencement address. As Columbia rolled to a stop on a Mojave Desert airstrip following its successful fourth mission, NASA's Space Transportation System passed from its test phase to "operational" status as America's primary orbital workhorse.

The flight also underscored another transition, though the change has in fact been underway for several years: a blending of the nation's once firmly distinct civilian and military space programs. The week-long mission was the first of the shuttle's forays to carry a payload for the Department of Defense, with a classified cluster of instruments such as infrared and ultraviolet sensors to help develop future surveillance and early-warning systems. The package was not loaded until the shuttle was already in position on its Florida launchpad, and the flight crew, astronauts Thomas K. Mattingly and Henry W. Hartsfield, were instructed not to transmit television pictures of the payload bay during the mission.

But DOD and other agencies concerned with national security will be doing a lot more in the future than just riding NASA's taxi. At the post-landing ceremony, President Reagan announced a new National Space Policy, which, though it also deals in general terms with civilian science and applications, leans heavily on security-related affairs. Even in a section reaffirm-

ing U.S. commitment to "the exploration and use of space...for peaceful purposes," a White House fact sheet on the new policy notes that "'peaceful purposes' allow activities in pursuit of national security goals."

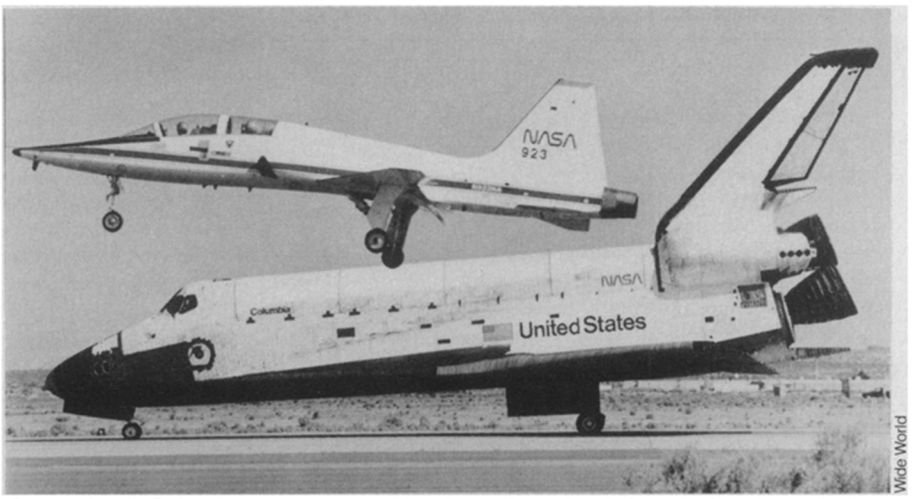
The U.S. "will proceed with development of an anti-satellite capability," according to the fact sheet, "with operational deployment as a goal." In addition, the document says, the country "will develop and maintain an integrated attack, warning, notification, verification and contingency-reaction capability," and "an aggressive, long-term program will be undertaken" to assure the survivability of such systems in space.

The overall U.S. space program "will be comprised of two separate, distinct and strongly interacting programs — national security and civil." The influence of the former over the latter, however, appears intended to be considerably stronger than in the past. On several occasions over the years, for example, the Pentagon has sought to constrain the capabilities or data-distribution of some NASA sensors. President Carter established a Policy Coordinating Committee for Space to resolve such issues, and the new Reagan policy takes an even firmer stand. "Civil earth-imaging from space," says the fact sheet, "will be permitted under controls when the requirements are justified and assessed in relation to civil benefits, national security and foreign policy. These controls will be periodically reviewed to determine if the constraints should be revised." Although NASA officials say that the shuttle's future launch dates will now be determined by the requirements of its paying customers rather than test milestones, the new policy notes that national security missions will automatically receive priority if a scheduling conflict should arise.

Indeed, Pentagon veterans are already represented at high levels within NASA itself. The Space Transportation System is headed by a major general, the deputy administrator of the whole agency is a former Secretary of the Air Force, and Gen. Lew Allen Jr., retiring USAF Chief of Staff, has been rumored to be under consideration as the new head of Jet Propulsion Laboratory, the Caltech-owned facility that is NASA's main center for planetary research. On Sept. 1, meanwhile, the Air Force plans to formally establish its new Space Command.

Issues arising under the Reagan space policy, whether civil or military, will be evaluated by a newly established Senior Interagency Group on Space, chaired by the President's Assistant for National Security Affairs. Besides representatives from NASA and the Commerce and State Departments, the group consists of members from DOD, the Joint Chiefs of Staff, the Arms Control and Disarmament Agency and the Central Intelligence Agency.

The President's policy announcement



Space shuttle Columbia, accompanied by chase plane, lands from its fourth test flight.

was made against the almost ideal background of the shuttle flight's solid success. Despite a hailstorm the night before liftoff that one official called the worst thunderstorm and hail damage to hit a NASA launchpad in 22 years, Columbia soared into orbit as planned on June 27, the first of the four test missions to both take off and land on schedule.

The flight's major mishap occurred during the ascent, when the craft's two huge solid-fuel booster rockets, jettisoned after use, suffered stuck parachutes and crashed into the ocean. Normally the boosters would float on the waves until they were recovered and refurbished for reuse. This week, efforts were underway to bring up enough of the crushed remains from beneath 3,100 feet of water in hopes of at least understanding the cause of the chute failure. The bill for the two boosters: $50 million.

Once in space, Mattingly and Hartsfield set about an exhausting variety of tasks, ranging from tending the secret DOD gear to activating a "Getaway Special" canister filled with privately funded, student-designed biology and materials-processing experiments. (The Getaway Special at first refused to operate, until analysis on the ground suggested a "hot-wiring" technique.) The Getaway canister had been test-flown for the first time on the shuttle's third flight several months ago, but last week's journey marked its first operational trip.

Other experiments on the flight included an industry-supported test of continuous-flow electrophoresis as a way of producing super-pure biological materials; a repeat run of a film-and-photocell survey of lightning in earth's clouds (the initial run, on flight #2, was cut short when the mission had to be prematurely ended due to a malfunctioning fuel cell); and a host of experiments regarding the shuttle itself — its responses to aerodynamic and other loads, as well as its generation of electromagnetic, particulate and other "pollutants" that might affect sensitive scientific instruments on future flights. The shuttle's 50-foot manipulator arm, vital for such envisioned tasks as retrieving damaged satellites, got a healthy workout, and one of the astronauts put on one of the shuttle's spacesuits, which would be needed only if a spacewalk is necessary for "outside work." A trial spacewalk has been tentatively scheduled for the next flight, now due in November.

Other tests involved turning different sides of the shuttle to face the sun for hours at a time, to evaluate the stresses on the craft caused by the extreme difference between the sun's heat and the cold of dark space. At one point, the huge doors to the payload bay refused to close properly — a potentially critical matter, since the doors must be closed for reentry through the atmosphere — but setting the shuttle into a slowly rotating "barbecue mode" for several hours equalized the temperatures, as expected, and the doors closed without further prodding.

The shuttle astronauts were not the only spacemen in orbit. Since May 14, Soviet cosmonauts Anatoli Berezovoi and Valentin Lebedev have been aboard the Salyut 7 space station, and two days before the shuttle launching they were joined by three others — Vladimir Djanibekov and Alexander Iventchenkov, plus the first French cosmonaut, Jean-Loup Chretien. The trio stayed aboard until July 2, taking part in a variety of biomedical and other tests, after which they returned to earth aboard their Soyuz spacecraft and left the original duo to its long-duration mission.

The previously launched Soviet space station, Salyut 6, meanwhile, is still in orbit (though unmanned), being evaluated in studies of potentially larger space structures for the future. There had been some anticipation that President Reagan might give the go-ahead for a U.S. space station in his speech at the shuttle landing, but he referred only to the non-specific goal of "establishing a more permanent presence in space." (As he spoke, a 747 jet took off carrying the second shuttlecraft, "Challenger," to Florida for a planned January maiden launch.) —*J. Eberhart*