

advisory committee and cited the need for urgency because the Russians might already be ahead (4). Los Alamos had not made good use of its limited resources, he said, and had been inflexible in its approach to the super.

In fact, as Los Alamos sped ahead

with work on method D, relations between Teller and others on the staff cooled. Teller, among other demands, wanted the thermonuclear test moved up. Teller and Norris Bradbury, the postwar director of the lab, could not agree on who should direct the actual

building of the bomb. "Bradbury had great experience in administrative matters like these," writes Bethe. "Teller had no experience and in the past had shown no talent for administration." Teller had abandoned programs in mid-stream. He had injected modifications

No Fraud Found in Alcoholism Study

A 5-month inquiry into allegations of fraud and other improprieties in an influential research project concerned with the treatment of alcoholics has concluded that there is "no reasonable cause to doubt the scientific or personal integrity" of the two researchers who conducted the study. The inquiry found that the researchers, Mark and Linda Sobell, did not fabricate data and, except for one lapse—asccribed to carelessness—that they accurately reported their procedures and results. Although the report of the inquiry, published on 5 November, vindicates the Sobells' integrity, it is unlikely to still the controversy that has swirled around the interpretation of their research.

The focus of the controversy is a project conducted by the Sobells at Patton State Hospital in San Diego in the early 1970's. Their research suggested that some people who are physically dependent on alcohol can be taught to moderate their drinking. Conventional wisdom held (and to a large extent still holds) that abstinence is the only cure for physically dependent alcoholics, but the Sobells reported that a group of 20 alcoholics taught to control their drinking fared better than a similar group whose treatment was geared toward total abstinence.

These findings were widely publicized and sparked a raging controversy among alcoholism researchers. The controversy hit the headlines earlier this year with the publication of a follow-up study, conducted by an independent team of researchers, that found only one of the 20 experimental subjects successfully controlled his drinking over several years, and there was some doubt whether he had ever been physically dependent on alcohol. (Eight continued to drink heavily, six abandoned their efforts to engage in controlled drinking and became abstinent, four died, and one was missing, the study found.) The follow-up study also emphasized that most of the subjects who took part in the Sobells' controlled drinking program had a high incidence of rehospitalization, alcohol-related arrests, or bouts of heavy drinking even during the 2 years they were studied by the Sobells (M. L. Pendery, I. M. Maltzman, and L. J. West, *Science*, 9 July, p. 169).

The team that conducted the follow-up, headed by Mary Pendery of the Veterans Administration Medical Center at San Diego, and Irving Maltzman, professor of psychology at the University of California at Los Angeles, interviewed people who took part in the Sobells' project and examined hospital and law enforcement records. The Sobells tried to block the Pendery group's study on the grounds that the confidentiality of the subjects might be compromised.

Although the published version of the Pendery group's paper contained no allegations of misconduct by the Sobells, an unpublished draft suggested that the research was not conducted in the way the Sobells had claimed and that

the reported results were inaccurate. Also, in June, Maltzman was quoted by the *New York Times* as saying, "Beyond any reasonable doubt, it's fraud." The Toronto-based Addiction Research Foundation, where the Sobells are now working, appointed a four-person committee of enquiry to look into the allegations early in June. It was headed by Bernard Dickens, professor of law at the University of Toronto.

The committee interviewed the Sobells, looked at much of their raw data, listened to some of the tape-recorded interviews they had conducted with the experimental and control subjects, and received sworn affidavits from research assistants who took part in the study. Pendery, however, declined invitations to participate, and Maltzman says he was never approached directly by the committee.

In essence, the committee concluded that the Sobells had carried out the research in the way they reported, and that they had not misrepresented the results. But, although the committee refuted a variety of unpublished allegations against the Sobells, it explicitly avoided judging the central issue raised by the Pendery team's published findings: whether alcoholics can be taught to moderate their drinking. The committee did not contest the Pendery team's detailed findings about how badly the controlled drinking group fared, for example, but said that these findings should have been put in context by looking at what happened to the group given more conventional therapy. (The Pendery team's published paper said, however, that the groups were not compared because "we are addressing the question of whether controlled drinking is itself a desirable treatment goal, not the question of whether the patients directed toward that goal fared better or worse than a control group that all agree fared badly.")

The committee did criticize the Sobells on one point. They had reported that they interviewed research subjects and people connected with them "every 3–4 weeks throughout the entire follow-up period." But most subjects were contacted less frequently, and in some cases there were gaps of 3 to 6 months between interviews, the committee said. It concluded that the Sobells were "careless" in estimating a statistic they never calculated.

The committee's findings have clearly failed to convince the Sobells' critics. Maltzman told *Science* that he considers the report "an outrageous whitewash." He maintains that the committee should have reinterviewed the experimental subjects rather than rely on the Sobells' records, and says that in misreporting the frequency of contacts, the Sobells "committed fraud." Dickens says that the committee decided not to reinterview the subjects in part because recollections by alcoholics of events many years ago may not have been reliable.—COLIN NORMAN