Random Samples:

Did Billy Really Die a Kid?

History records that outlaw William H. Bonney (aka "Billy the Kid") was shot to death in an ambush by Sheriff Pat Garrett on 15 July 1881. But legend has it that Billy somehow miraculously escaped the trap Garrett laid for him in a rancher's home in Fort Sumner, New Mexico, and went on to live to a ripe old age in Texas.

With the help of a computer, researchers at Los Alamos National Laboratory are working with historians to determine once and for all whether Billy really died a 22-year-old "kid."

Historians from the Lincoln County (New Mexico) Heritage Trust are working with an authenticated tintype photo of Billy and a similarly genuine photo of one Brushy Bill Roberts, who died in Hico, Texas, in 1950. Roberts claimed at various times to be both the Kid and Frank James, of the notorious James Gang, according to Bob Hart, the trust's director. In the year before his death, Roberts even asked the governor of New Mexico for a pardon for the murders he claimed to have committed as Billy the Kid. About a dozen other photos said to be of Billy have also surfaced and will be examined.

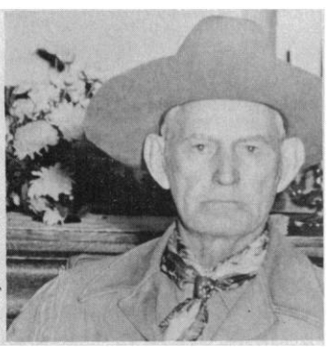
First a team of historians will examine the photos to ensure their authenticity. For example, are the guns and clothing in the photos authentic to the period? Then, too, was the type of camera needed to take the picture in existence at that time?

Copies will be made of all the photos, and will be fed into a scanner linked to a VAX mainframe computer. The computer will reduce the images into pixels and, if necessary, will enhance parts of the images. A team led by the eminent forensic anthropologist Clyde Snow—now in Argentina investigating the remains of some of that nation's *desaparecidos*—will then examine the facial features to see if there's any reason to believe Billy became Brushy Bill.

Los Alamos researcher Thomas Kyle calls the project "an interesting, challenging problem. We won't be enhancing the photos to make them look better. In fact, they may well look worse to the eye." Instead, Kyle said, the computer will bring out hidden or obscured images. If, for example, a hat is shading the subject's eyes, Kyle's team can alter the contrast to "remove" the shading and fill in the formerly shaded area. Similarly, if the subject is facing left in one photo and right in another, the computer can manipulate the images so they face the same way. While the resulting images may not look better, they'll be easier for Snow's team to examine for similarities and differences.

In the past, the lab has used the technique to enhance, for example, photos of bank robbers taken by video surveillance cameras. But this is the first time the lab has ventured into the realm of legend. Future applications may include a look at the legend of outlaw Butch Cassidy. History records that Butch, too, died in a shoot-out, this one in Bolivia in 1908. But local legend in Argentina, where Snow has worked extensively, places his grave there and still others claim he died a businessman in Seattle in 1937. It seems bad guys, or at least their legends, don't want to die.

Courtesy of Lincoln County Heritage Trust



Courtesy of William A. Tunstill

A tale of two Billys. *But are "the Kid" (left, in 1879) and Bill Roberts (right, in 1950) one and the same? A team at Los Alamos hopes to find out.*

"For a successful technology, reality must take precedence over public relations, for nature cannot be fooled."

—the late Richard Feynman on NASA's attitude toward the space shuttle program, in the second installment of his autobiography, *What Do You Care What Other People Think?* (Norton, 1988)

The Price of Terrorism

The tragedy of Pan Am Flight 103, felled by a terrorist bomb on 22 December, was a scientific tragedy as well. One of the passengers killed was Irving S. Sigal, a 35-year-old biochemist who was senior director of molecular biology for Merck Sharp & Dohme Research Laboratory. Sigal headed the lab's efforts to develop an anti-AIDS drug by designing inhibitors for the HIV protease.

Michael Rosenblatt, a Merck vice president, called Sigal "a brilliant and dedicated scientist who had a real drive to take the approaches of modern molecular biology and translate them into new therapies for human disease."

Keeping Your Resolutions

If you've kept that resolution you made last month, you're doing pretty well, according to a new study. Only about 55% of resolution-makers keep their promises 30 days after the New Year dawns, says John C. Norcross of the University of Scranton. If you're still being good 2 years from now, you're among the elite—only 19% make it that long.

Norcross and associates studied a group of 213 Pennsylvanians who called a local television station in late December 1985 to announce their resolutions for the coming year. The subjects were interviewed over the telephone by psychology graduate and undergraduate students, and most were followed for two full years. The data were published last month in the *Journal of Substance Abuse* and in *Addictive Behaviors*.

The most frequently made resolutions were to lose weight (38%), stop smoking (30%), improve personal relationships (5%), cut back on alcohol consumption (2%), and save more money (2%). Other resolutions, Norcross says, were too idiosyncratic to categorize.

The researchers also asked subjects what they found most useful in keeping their resolutions. Successful resolvers most often cited willpower and the use of reminders not to give into the problem behavior. Not surprisingly, self-blame and wishful thinking were not associated with success in shedding an unwanted behavior.

Studies show that more than half of U.S. adults make New Year's resolutions, Norcross says, and his findings suggest that people can keep their resolutions if they use willpower, control their environment to avoid temptation, and reward themselves in some way for keeping their resolution.

"Nonetheless," he warns, "New Year's resolutions should not be entered into lightly or thoughtlessly." Even casually made resolutions that aren't kept can damage a person's self-confidence, he says.

■ GREGORY BYRNE