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## Time in a Bottle

As the Millennium Approaches, Gadgets Are Piled Into Capsules as a Present for the Future

## By PAMELA LICALZI O'CONNELL

t's time capsule time. As the new century approaches, instant archeology is being created by civic groups, schools, churches, businesses and a surprising number of families and individuals who have chosen to encapsulate the present for the presumed benefit of the future.

The time capsules of today differ, in many instances, from those of the past. The technological obsessions of the current age have shifted the way some now handle time capsules -- perhaps, experts say, because technology has changed the way we think about time. What is placed in capsules, how long they are sealed and for whom they are earmarked may no longer be so obvious.

Renewed interest in time capsules is attested to by manufacturers, who report big sales increases. (A \$20



Chuck Rogers for The New York Times

CAP AND CAPSULE - Cary Hammer, of San Francisco bought a time capsule to bury for 1,000 years; his 15-month-old son, Milo, added a bottle of bubbles.

"personal" capsule available in card stores could reach sales of tens, or perhaps hundreds, of thousands by the end of the year.) The Smithsonian Institution, responding to a surge in inquiries, particularly from corporations, plans a seminar this fall on the proper preparation of capsules. And the International Time Capsule Society is experiencing a flurry of interest in its mission and its registry of completed capsules, the only listing of its kind.

"People used to think of time capsules as sort of eccentric kids' stuff," said Cathleen O'Connell, an independent filmmaker in Seattle who is completing a documentary on the subject. "But it's an activity that has been legitimized by corporations, cities and builders to an amazing degree, and it's also been democratized. Anyone can buy their own custom-engraved capsule now."

While the boom in time capsules at century's end is not surprising, what is perhaps surprising is the discussion over what to put in them -- specifically, what information or data (and in what format) and what "realia," the term experts use for objects that are telling indicators of an era.

Since much of society's end-of-century reality is expressed in digital gadgets and digitized information, the discussion is that much more interesting. The digital is ephemeral, historically speaking, because the devices may not work in the future and the data will degrade, some quite quickly. For instance, when stored at room temperature, magnetic tapes can be expected to last only 20 years, CD-ROM's for 50. So-called analog items, like acid-free paper, do a lot better over the long term, archivists and preservationists say.

The paradox is that while technology has never allowed a broader spectrum of people to record more about their lives than now, today's time capsules could prove even more irrelevant to historians and scholars than those of the past.

"The more technology-dependent the contents of a capsule, the more vulnerable," said Paul Hudson, a founder of the International Time Capsule Society, at Oglethorpe University in Atlanta (<a href="www.oglethorpe.edu/itcs">www.oglethorpe.edu/itcs</a>). "People should think much more simply, much more naïvely, about what to put in them," he added. "Sit down and write a message to the future with a No. 2 pencil on paper."

Yet such arguments may be out of step with the spirit of the time. A recent survey sponsored by Korbel Champagne Cellars, which has no small interest in Dec. 31, asked consumers what single item should be included in a capsule destined for 3000. Among the top answers was a laptop computer. And interviews with capsule planners reveal that audio cassettes, VHS home movies, CD's of popular songs and recordable CD-ROM's loaded with personal data and images are prominent on millennial packing lists.

The future isn't what it used to be: some time capsules are buried for just 10 to 25 years.

People interested in a discussion of archival protection and resources, prepared by the Smithsonian's Conservation Analytical Lab, might want to visit the <a href="mailto:simsc.si.edu/cal/timecaps.html">simsc.si.edu/cal/timecaps.html</a> site.

For some, there is no issue at all: they shoot a video and let their smarty-pants descendants figure out how to play it. Norman Davis, who helped in the recent burial of a

time capsule in Englewood, N.J., to be opened in 100 years, said he had videotaped the ceremony up to the point of burial and included it in the capsule. "No one in 2099 will likely have a VCR, but that's their problem," he said.

Such attitudes are not surprising, said Gregory Benford, a science-fiction writer, a professor of physics at the University of California at Irvine and the author of the new book "Deep Time: How Humanity Communicates Across Millennia" (Bard/Avon). "Yes, digital media will be unintelligible to the future," Dr. Benford said, "though burying a laptop fully loaded with software is at least an attempt to include the medium with the message." He added that even in antiquity, tomb builders often enclosed their favorite gadgets. "Today there's a leap of faith involved that the future will be able to figure it all out," he said. "Actually, it's a symptom of modernity, this assumption that the future will be interested in the past at all."

Cary Hammer, a Web and video game developer, and his wife, Nadine Browning, plan to celebrate the coming of 2000 with a party -- as do a few billion other people. But their party, at their home in San Francisco, will center on the burial of a time capsule in the backyard, and to that end, Hammer has bought a \$55, 18-by-4-inch polymer tube from Future Archaeology of Manhattan.

Hammer is asking guests to bring items for interment until 3000. "I like the idea of it, the pseudo-immortality of it," he said of time capsules. "I want to walk around my house with a video camera and talk about everything in it, what our jobs are like, and put that tape in the capsule." He also plans to put in one of the games he developed. "It would be nice if something I created was around 1,000 years from now," he said.

He said of one invited guest: "This friend thinks that so many copies exist of everything digital, it's so pervasive, that it doesn't need a time capsule to be preserved.

There is even a company archiving the entire content of the Web every week. He prefers to put in more mundane, random items, such as an apple peeler."

There have been attempts throughout time capsule history to think through the problem of the unintelligible message, like one included on a medium that requires an obsolete device to "read" it (a book displays itself, but a CD-ROM must be "opened" with a separate device).



The International Time Capsule Society maintains the Crypt of Civilization, a swimming-pool-size vault sealed in 1940 that has been described as "a kind of Noah's Ark of Depression-era knowledge and technology"; it will not be opened until 8113. That year was chosen because the people who created the crypt decided that 1940 was the midpoint between the start of time and 8113, although some might take issue with their calculations.

The crypt includes, among many other things, 640,000 pages of microfilmed material and, crucially, a film reader with a wind-powered generator. The crypt's planners left little to chance: the first item encountered upon entering the crypt is a device designed to teach English to its finders.

Similarly, the Voyager spacecraft contained a kind of time capsule intended for extraterrestrials: a 12-inch gold-plated phonograph record carrying sounds and images selected to portray the diversity of life and culture on Earth. Each record is encased in a protective aluminum jacket along with a cartridge and a needle. Instructions, in symbolic language, indicate how the record is to be played.

The New York Times is making plans for a Times Capsule to complement a 1999 series of six special Times Magazine issues inspired by the millennium change. Jack Rosenthal, editor in chief of the Times Magazine, said the paper was considering a method of including data in its capsule (to be deposited for 1,000 years at a still undecided spot in Manhattan) that uses a new technology known as HD-Rosetta. It can etch data microscopically, using a charged-particle beam, on a nickel disk that can be read with a microscope. More than 90,000 8-by-11-inch text pages can be stored on one 2-inch disk.

Children's University, a private elementary school in Arlington, Tex., is planning a millennial time capsule to include a school scrapbook and items selected by the children. Lynn Kenner, the school's director, said that when it came to messages, the students insisted that their words be put on computer diskettes. "We suggested paper, but the kids wanted the space to really say a lot," she said, "and they also appear to feel that computers are the way to communicate with the future." The school's capsule will be buried for just 12 years.

Short-term capsules do appear to be growing in popularity. Chris Chance, managing director of Future Archaeology (<a href="www.futurearchaeology.com">www.futurearchaeology.com</a>), a capsule manufacturer that has sold nearly 4,000 capsules this year -- up fourfold from last year -- said many of his customers were planning to open their capsules in a mere 10 to 25 years.

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Dr. Benford did not approve. "Where is the sense of awe in that?" he said. "You might as well just send it to yourself through the mail."

Time-Saving Tips

(April 22, 1999)

Jeff McCarty argues that burial is passé. He

is founder and president of the Original Time
Capsule Company, in Greenfield, Ind., which
plans to sell \$20 "personal capsules" in card stores. It offers capsule
kits to commemorate personal events like graduations and births.

"People can't relate to anything longer than a human lifetime," McCarty said. "The trend is that people want to open up their own capsules. That's what I'm planning for a capsule I created last year for my wedding. I'm going to open it in 10 years." He included a cellular phone in his capsule because "it's something I use a lot."

The new preference for quickie time capsules may in itself reflect society's technological obsessions, said Alexander Rose, executive director of the Long Now Foundation (<a href="www.longnow.org">www.longnow.org</a>), a group in San Francisco that among other things is trying to spur opinion makers to embrace longer-term perspectives by building a 10,000-year clock. "Short-term capsules are a reaction to technology," Rose said. "They're saying you can't look beyond 5 to 30 years because that's our technological cycle, the life cycle of our devices."

Short-lived time capsules do sidestep a basic conundrum: It has been estimated that for every thousand or so capsules that are buried, only one is found. The International Time Capsule Society even maintains a list of Most Wanted capsules, prominent examples that have not been found.

McCarty said there might be a happy medium between the shallow and the deep that also solved the problem of technological obsolescence: "perpetual" capsules that are opened at regular intervals. He is involved in an effort to create what he calls "the first fully electronic capsule" as part of the Times Square 2000 event. It will include messages from high school students throughout the nation and other information using digital videodisks.



CAP AND CAPSULE - Paul Hudson, founder of the International Time Capsule Society, at the ``Crypt of Civilization vault."

"We're considering a plan

to open it every 25 years and migrate the information inside to new technology," he said. "Think about it: we all put our 8-millimeter home movies on VHS, and it was no big deal."

To think in short windows, some people say, undercuts the value of

time capsules. The act of choosing what goes into a capsule can inspire a time-spanning perspective; ideally, argues Rose, of Long Now Foundation, it should be an exercise in thinking in generational scales, not just in terms of the next quarter or the next election.

But Ms. O'Connell, the filmmaker, said, "One of the truths about capsules is that they are as much for the here and now as they are for the future."

## **Related Sites**

These sites are not part of The New York Times on the Web, and The Times has no control over their content or availability.

- International Time Capsule Society
- Smithsonian's Conservation Analytical Lab
- Future Archaeology
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