

TIME CAPSULES: PRESERVING THE PRESENT FOR THE FUTURE

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Introduction

It seems a basic human urge to leave for posterity something which conveys a sense of who we are and what is important to us. Photograph albums, bibles, birth certificates, marriage licenses, favorite old clothing, and a host of mementos often serve this function for families. For communities, however, the task is more difficult. Our present-mindedness and the sheer volume of potential material results in routinely discarding many objects which promise to provide insights about ourselves to future generations. Fortunately, historical anniversaries tend to awaken not only an appreciation of the past, but also the realization that what happens today is tomorrow's history. Consequently, time capsules are often part of a historical celebration. This certainly was the case for the Payne County Historical Society, which prepared a capsule as part of the 1889 Land Run centennial. What follows is some practical advice based on that experience.

Getting Started

As in most things, planning is essential. The preparation and placement of a time capsule raises many questions, all of which require simultaneous consideration. What should be placed in it? Why? How long will it remain sealed? How should the contents be prepared for enclosure? Where should the capsule be placed? How will those in the future know where it is and when to open it?

Nearly a year before burying its time capsule, the Payne County Historical Society formed a committee to direct the project and address these very questions. While the answers sometimes changed, careful deliberation from the very start proved invaluable.

Selecting a Time Capsule

Choosing the actual vessel is fundamental to success, since it largely determines the environment in which the contents will remain for a prolonged period of time. A capsule should be large enough to store the desired materials loosely. This minimizes potential damage from items pressed together too tightly, while also providing some protection against possible chemical permeation should an item break or deteriorate once the container is sealed. In most cases, a rectangular or square vessel is preferable. Cylinders usually require that paper contents be rolled, whereas they should be laid flat to ease stress on the fibers.

Time capsules come in a surprising

array of materials--stainless steel, aluminum, copper, or even polyethylene pipe. Polyvinyl chloride (PVC), however, should be avoided since it will eventually begin to decay and emit harmful acids and gases. At least two companies manufacture time capsules, as indicated at the end of this bulletin. Containers may also be locally made, ideally by professional machinists or welders. Whether purchased from a manufacturer or individually fabricated, the capsule must meet three physical criteria. First, it must be constructed of a chemically inert or highly stable material so the vessel itself will not ultimately damage the contents. Second, it should have as few seams as possible in order to prevent the harmful introduction of oxygen and moisture. Third, for similar reasons, it should be capable of being sealed airtight.

The Payne County Historical Society chose a commercially produced stainless steel time capsule. This state-of-the-art container included a valve which enabled the oxygen inside to be replaced with inert argon gas. Be forewarned, however, that this can be expensive. The Society's 40"x14"x12" capsule cost about \$2,000. Nevertheless, it seemed a sound investment toward assuring that the contents would survive intact until the capsule was opened in 2089.

What to Put In It

Deciding what to place inside a time capsule presents a most intriguing challenge. After all, how do you convey in a very limited space the meaning of a community or institution? What is it you want the future to know about you, and what items will impart this message? Obviously, the answers will vary according to the reasons behind the time capsule, as well as its size.

In undertaking a time capsule, the Payne County Historical Society wanted to present an accurate picture of what ordinary life in Stillwater and Payne County was like in 1989 to area residents one hundred years into the future. Thus, all contents had to have a direct link either to the city or county; those with state or national associations were excluded. A decision was also made very early to avoid obvious objects which would probably survive into the next century without the benefit of a time capsule. These included the newspapers, directories, and lists of public officials ordinarily available at most local libraries and government offices.

Instead, items which were unique to the community or captured its essence were sought. A t-shirt from a well-known bar and restaurant, the menu from a long-estab-

lished pizzeria, and randomly selected daily logs from the hospital, police department, and fire department are but a sample of such material. Black-and-white photographs of the county's central business districts (compared to color, the least likely to suffer deterioration over time) provided a pictorial record of the 1989 built environment for the future.

Perhaps most notably, the Society decided not to prepare oral history tapes, primarily because it remained uncertain whether magnetic tapes would retain their fidelity after 100 years. Besides, it is also conceivable that an ordinary cassette player may not be available in the future, except as a museum piece. If audio or videotapes are part of a time capsule, it is best to include a player if at all possible. Instead, the Society asked approximately 100 county residents, representing a wide socioeconomic spectrum, to record on acid-free paper who they are, their present concerns, and their hopes and fears for the future. Such an approach offered several benefits. By asking individuals to record their impressions on paper, a greater number of residents were able to participate than would have been the case with time-consuming oral interviews. Also, allowing contributors to do this privately hopefully resulted in candid responses which will provide meaningful insights to those who eventually open the capsule and read them. Furthermore, the use of acid-free paper rather than magnetic tape seemed the best method to assure these important contributions would survive. Finally, the entire procedure allowed us to gather a great deal of information in a very time and cost efficient manner.

Preparing the Contents and Capsule

Whatever the contents, they must be prepared for prolonged storage in the time capsule without significant deterioration. Basically, this involves employing the best preservation techniques feasible. Librarians and museum curators can be extremely helpful in this task because they routinely deal with arresting the ravages of time on paper and objects. Even if such expertise is not readily available, some common-sense steps--based on the Payne County Historical Society's experience--follow.

If at all possible, paper used in recording information and enclosed in the capsule should be acid-free and placed in acid-free folders. Any acidic papers should likewise be put into acid-free folders. If newspaper items are to be included, photocopy them on to acid-free paper. Objects may be wrapped in acid-free tissue

jects may be wrapped in acid-free tissue paper as well. This minimizes the migration of harmful acids and other chemicals should they come into contact with one another. Photographs, preferably black-and-white, should be enclosed in Mylar for similar reasons. All these preservation supplies are commercially available; company names and addresses can be obtained by contacting the Oklahoma Field Advisory Service office (405-521-2491).

The contents should not be packed too tightly when filling the capsule. To prevent damaging folds and creases, lay paper items flat. Objects should be situated to prevent abrupt shifting. An alkali compound or silica gel placed inside will further neutralize acidity and oxidation once the capsule is closed. When finally sealing the vessel, take care to secure the lid tightly in order to make it as airtight and waterproof as possible. If the capsule allows the oxygen inside to be removed, as did the Payne County Historical Society's, do so only to about 2 pounds atmosphere. Creating a vacuum may cause the container to collapse. Replace the oxygen with an inert gas such as argon. Once the capsule is sealed, carefully transport it to the site where it will be placed.

Where to Put a Time Capsule

Where to place the sealed time capsule poses an interesting dilemma, for the site must meet two contradictory criteria. First, it should provide protection against vandalism, theft, and the elements. At the same time, the location needs to be sufficiently well-known that it can be found when the time to open it arrives. As recent news articles reveal, the locales of a surprising number of capsules have been forgotten over the years.

Walls, cornerstones, and the ground have been the most popular locations for time capsules. The first two offer the advantages of a relatively dry environment, whereas water is always a concern in the latter. If burial is chosen, the site should be one unlikely to be disturbed during the capsule's lifetime. It also should be placed below the freeze line to prevent damage from the seasonal heaving of the soil. A local agricultural extension agent, or master gardener, should be able to provide such information. For added protection, the capsule may also be placed in a burial vault.

Assuring that future generations will know where the time capsule is, and when it should be opened, can be accomplished in several ways. The Payne County Historical Society, which buried its capsule (below the freeze-line and in a burial vault), also erected an inscribed granite bench over its county courthouse lawn location. Marking is also highly desirable for walls and cornerstones since future renovations could endanger the capsule. Some organizations have simply relied on their written records, a technique which dangerously presumes that they will remain in existence when the capsule is to be opened. The State of Washington recently entrusted a corps of school children as keepers of the statehood centennial time capsule to be opened in 50 years. Whatever means employed, the originators of a time capsule have an obligation to leave behind an accurate and clear indication of both its location and when it

is to be opened.

Opening a Time Capsule

In addition to initiating a time capsule, the Payne County Historical Society also opened one during the 1889 Land Run centennial. When the county courthouse was dedicated in 1917, officials entombed a copper box containing various articles in its cornerstone. However, they left no instructions on when it should be opened, so the centennial seemed the most opportune time to do so. Immediately, the Society decided to proceed cautiously and sought advice from both the Oklahoma Historical Society and the Oklahoma Museums Association. Their joint Field Advisory Service provided invaluable assistance which guided the entire procedure.

Once located, the box was removed from the cornerstone several days prior to opening. This allowed a gradual exchange of air within the container. Abrupt environmental changes can be extremely harmful to materials enclosed for a prolonged period of time. When the box was carefully pried open, the person removing the contents wore white cotton gloves in order to prevent damage from contact with skin oils. Inside were mostly paper items, including newspaper and stationery, most of which exhibited advanced deterioration. Wherever necessary, papers were left folded and placed on acid-free paper. Picture postcards were placed in Mylar, and a trowel was wrapped in white cotton cloth. The local museum eventually displayed the box and its contents, but only after subjecting them to further preservation techniques and giving them several weeks to adjust to their exposure.

Conclusion

Undertaking a time capsule can be an exciting part of a historical celebration. Judging by the crowds which witnessed both the opening of the copper box and the placement of the new time capsule in Payne County, it is also a very popular activity. Yet, actually preparing a time capsule offers many challenges and requires considerable forethought. This bulletin, hopefully, will help those who undertake this rewarding endeavor.

Time Capsule Manufacturers

Time Capsules, Inc.
P.O. Box 5008
Richmond, VA 23220
(804) 355-1721

American Aluminum Company
230 Sheffield Street
Mountainside, NJ 07092
(201) 233-3500

Bibliography

"Acid-Neutralizing Papers." Information Sheet #374. Washington, DC: Conservation Analytical Laboratory, Smithsonian Institution, 1982.*

Cleveland, Marjorie W. "Time Capsule Construction and Contents." Washington, DC: Conservation Analytical Laboratory, Smithsonian Institution, 1988.*

"Considerations for the Construction of a Time Capsule." Andover, MA: Northeast Document Conservation Center, 1987.*

MacLeish, A. Bruce. *The Care of Antiques and Historical Collections*. 2nd ed., rev. Nashville: American Association for State and Local History, 1985.**

"Preservation of Paper in Time Capsules." Information Sheets #364 A & B. Washington, DC: Conservation Analytical Laboratory, Smithsonian Institution, 1980.*

Ritzenthaler, Mary Lynn. *Administration of Photographic Collections*. Chicago: Society of American Archivists, 1984. See Chapter 5, "Preservation of Photographic Materials."

"To Condition Silica Gel." Information Sheets 190 A & B. Washington, DC: Conservation Analytical Laboratory, Smithsonian Institution, 1982.*

*Information Sheets from the Smithsonian Institution and the Northeast Document Conservation Center are available from the Oklahoma Field Advisory Service Office.

**Available through the Oklahoma Field Advisory Service Reference Library.

Some Sources for Archival and Preservation Supplies

Conservation Materials LTD
240 Freeport Blvd.
Box 2884
Sparks, NV 89431
702/331-0582

Conservation Resources
International, Inc.
8000-H Forbes Place
Springfield, VA 22151
1-800-634-6932

The Hollinger Corporation
3810 S. Four Mile Run Dr.
Arlington, VA 22206
1-800-634-0491

Light Impressions
P.O. Box 3012
439 Monroe Ave.
Rochester, NY 14607
1-800-828-6216

Talas
213 W. 35th St.
New York, NY 10001
212/736-7744

University Products, Inc.
517 Main St.
Holyoke, MA 01040
1-800-628-1912