ARCHAEOLOGY, SYNCRETISM AND HISTORIC PRESERVATION

by

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INTRODUCTION

Over the past few years there has been a growing awareness of the linkage between historic preservation and archaeology. Of the many articles that have appeared in the media there have been none found by this author which compare what the two fields aim to accomplish and how they go about doing it. It is the intent of this paper to rectify that shortcoming, and to examine the nature of the interrelationship. In the present context, syncretism means the attempted reconciliation of two philosophies. The philosophy of historic preservation will be characterized in this section and the next, and archaeology will be characterized in that section. For the present, historic preservation can be thought of as seeking to retain selected aspects of the built environment for study within a particular context, particularly a historical context. Archaeology seeks to understand past ways of life by studying the remnants of past built environments, which often have no written historical context.

Preservationists can gain from a dialogue with archaeologists through exposure to fresh theoretical and methodological approaches. Archaeological techniques can more accurately date construction, and can help to reconstruct patterns of useage and landscaping. By

excavation and analysis, original construction techniques can be discovered and original hardware can be typed. The shift of focus for preservation from historic to cultural properties also requires a reappraisal of the use of the term "significant," and archaeological and anthropological theory can provide insights for more appropriate useage.

Archaeology can also benefit from the expertise of historic preservation, particularly as the focus of preservation becomes less constrained by the qualifier "historic." The destruction of archaeological sites proceeds apace, and the experiences provided by successful (and unsuccessful) preservation projects should provide lessons for archaeologists. Further, the body of knowledge amassed by preservationists can provide a wealth of information for historical archaeologists regarding architecture and design norms for specific eras.

The work assumes that the reader of a section has no familiarity with that field, and those who do may wish to go on to the next chapter. This simplified approach is meant to ensure that those new to one or the other field will become better informed, and to provide concise descriptions of each field which can be easily compared. Each discussion of a specialty will begin with background information, then proceed to examinations of the steps involved in each line of work.

Interdisciplinary research will be discussed in order to provide a basis for comparison, since disciplines will have different approaches to similar situations. Such derives from their different goals and methodologies, and a number of mechanisms have been devised to provide for communication between fields. These will not be discussed in great detail, but will provide a background in comparative methods that have general applications.

Historic preservation will be examined next. As it is currently conceived, this field is a very young one, and provides exciting opportunities for research. Defining the field's theory structure is problematic as a result of its youth, since theoretical constructions take time and mature, but an "ethic" (See National Trust, 1980) will become apparent. Much of this philosophy derives from dicta of the U.S. Department of the Interior through the Secretary of the Interior's Standards for Historic Preservation, which in turn derives from a series of Federal laws, which will be discussed.

Historic preservation theory also derives from several other disciplines, and all of those listed below contribute to archaeology as well. Architectural theory relates style and form to the human body and human needs. Many intangibles - unity, rhythm, scale, etc. - contribute to an architectural description of the built environment,

and aesthetic considerations provide one basis for assessment. Technical considerations, such as load-bearing capacities for various components, also relate to architectural theory, but they allow less room for discussions about the merits of one scheme over another than do aesthetics. Both of these sets of considerations are of great importance to archaeologists since they combine in unique ways to shape vernacular architectures, which synthesize order from social and environmental pressures.

History, too, provides a needed perspective. It is an aim of historic preservation to accurately depict the past, and the use of the term "historic" denotes that. The meaning of the word is mutable, however, and a clarification is in order. Barbara Tuchman writes; "...I believe that the material must precede the thesis..." and that "...it must be written in terms of what was known and believed at the time." (Tuchmann: 9) History is always open to interpretation, but this attitude is akin to the principle of "cultural relativism" that guides anthropologists toward objective descriptions of the cultures they study. Anthropologists attempt to understand another culture as the culture sees itself, and preservationists are adapting that attitude today. Thus, the conceptual distinction is that the distances are temporal rather than geographic. This concept of history will be used, and the mute artifacts of the archaeologist give it corporeal

form.

Museology also contributes to historic preservation theory, as it is developing. The curatorial management of museum collections is reflected in the management of historic sites. Through application of the principles of conservation a data base is maintained upon which future scholars can draw. The educational mission of a museum is one that historic preservation also aspires to accomplish, for without it there lies a danger of decreasing public awareness and support, not to mention the current concern for our children's "cultural literacy."

Other fields also contribute to the evolving body of historic preservation theory, but the preceding discussion will suffice to illustrate the point that a young field may draw from whatever areas available in order to develop to the fullest. Archaeology also draws from other disciplines in the type of intellectual osmosis espoused by such writers as Harold Dorn: driven not by mission-oriented goals but by the simple desire to understand. (Dorn: 30)

Archaeological theory is somewhat more directly described, and so is the relationship of archaeology to ethnology. In the American context, both disciplines are sub-fields of anthropology, and this relationship will be described. The basis of archaeological analysis as a means

of describing cultural change will also be outlined and related to historic preservation. There is a fundamental connection between the disposition of artifacts and the pattern of use of a structure or place. By relating artifacts to their physical surroundings, a history of those surroundings may be inferred which may differ significantly from what was previously thought or which could never be discovered through any other means.

The evaluative processes of each field will be examined, and the means by which goals are attained will be described. This approach may form a basis by which methodologies may be interlaced to maximize the achievements of on-site work by either field, which will also enhance off-site analysis by any researchers who may come later.

Technologies will be considered with regard to both fields. Survey and recording methods of both fields are very similar but will be covered separately and instances of overlap will be pointed out in context. There is a great deal of potential for interactive surveying in both disciplines, and by coordination between fields a great deal of time and money can be saved. More efficient collection of directly comparable data will result in savings of money and time, and since historic preservation and archaeology are both sporadically funded any savings should be welcomed.

The final section of this work will draw together main characteristics of historic preservation and archaeology, and describe means by which they may be coordinated to provide for their mutual enhancement. In this era of uncertain economic circumstances it is only prudent to consider such cooperative associations. It will be demonstrated that there is more to be gained intellectually through syncretistic action than through disregard and lack of understanding. Many discoveries result from newly acquired perspectives. It is hoped that this work will provide a basis for adherents of either discipline to understand the other and to appreciate its value.

An appendix is included which lists a number of agencies and organizations concerned with either historic preservation and/or archaeology. These are listed alphabetically rather than according to field, since there is a good deal of overlap.

DEFINITIONS

The following definitions cover words that may be unfamiliar or have conflictive perceived meanings. The definitions provided are accurate insofar as this work is concerned, although other definitions for the words may also be appropriate.

Syncretism: The attempted reconciliation of two different philosophies. It is commonly used in anthropological jargon, particularly with regard to religions.

Lifeway: The prosaic round of activities in which an individual engages regularly to accomplish the needs of everyday life.

Culture: 1) A certain style of living associated with particular types of tools and/or utensils; 2) A stage of development in a group of people marked by definable traits. (cf.: "Lifeways.")

Artifact: Any material remnant which is the result of human activity.

Preservation: The maintenance of an artifact in the same physical condition as when received by the curatorial agent, as little as possible being added or subtracted.

Conservation: 1) The protection of the natural environment from human degradation or other negative effects; 2) Physical intervention in the actual fabric of an artifact to insure its continued structural integrity.

Restoration: The process of returning an artifact to the physical condition it had during some previous stage of its existence.

Reconstruction: The recreation of vanished artifacts in the form of surrogate artifacts.

Reconstitution: The reassembly of an artifact from its constituent pieces, whether due to its destruction or purposeful dismantling.

INTERDISCIPLINARY RESEARCH

The problems of everyday life rarely lend themselves to neat classifications within a particular area of study. An assessment of environmental impact may call on the services of ecologists, planners, a variety of engineers, cost accountants and so forth. It is the nature of problems, therefore, to be interdisciplinary in nature. Similarly, the evaluation and preservation of a historic site or landmark may not be made most appropriately from the vantage point of any single discipline, but rather through an interactive strategy.

There are a number of impediments blocking smooth interaction between disciplines. Wilbanks (132) lists the following: disinterest, niche-seeking, acculturation and stereotypes. Additionally, there are systemic impediments in the milieu of research which also hamper cooperation, not the least of which is the compartmentalized and discipline-oriented nature of the academic community, particularly in universities. (Chubin, et al, 4; Saxberg, et al, 195; Bella & Williamson, 348.) There are also several mechanisms that have proven useful in overcoming these obstacles, which deserve consideration.

The first of the impediments listed by Wilbanks is "disinterest." The time one spends in reading about

another field is time one cannot spend in keeping up-to-date in one's own. Communication between fields, then, is limited in terms of basic understanding. The paradigms which form the basis of any discipline must be learned in order for effective communication to exist, and most people are ultimately not prepared to allocate the necessary resources.

"Niche-seeking" is the next of the problems identified. By this is meant the natural desire of people to gravitate toward people with similar interests, and thus to similar fields. Some people like spending all day at a computer terminal, while others cannot imagine it. These differences in outlook and values limit communication on a personal level.

"Acculturation" is an anthropological term used to refer to the process by which an individual learns proper modes of behavior for the group in which (s)he lives. In a professional community, this includes learning the appropriate jargon which describes the activities of that community. For example, we have all been to a doctor and heard the most mundane of symptoms described in the most arcane terms. Much the same thing occurs when any two professionals get together, and the only solution is to revert to plain English. This has the drawback of, perhaps, being less accurate or concise, but it may be essen-

tial. It also may hold the added benefit of ensuring that one is saying what one actually means.

The last of Wilbanks' problem areas is that of "stereotypes." Our society has built images of the various professionals as behaving in one manner or another, according to their particular discipline. Archaeologists have recently had to live down the Indiana Jones image created in films, for example. The trick is to get to know the individuals as individuals, rather than as architects or CPAs.

The systemic or structural problems are probably more intransigent, since they lie in the way universities and similar institutions are organized. Chubin, et al, describe disciplines as "historical evolutionary aggregates of shared scholarly interests." (4) In an institutional context these aggregates become departments. This is a bureaucratic necessity. Unfortunately, it also makes it difficult to administer any program of study or research which fails to fall into an existing niche. The administrators of a facility have prescribed goals and guidelines, set up by a board of trustees (or such-like) to which they are held accountable. These guidelines cannot be expected to foresee newly evolving lines of research, and administrative conflicts and headaches are the result.

On a more fundamental level, Bella and Williamson (348) note that there is a dichotomous relationship between detail and perspective. By focusing on a high degree of detail, one loses sight of the larger patterns and relationships between the elements under study. There is a great deal of pressure exerted on individuals to specialize within a discipline, both by academic structures and the marketplace. While detail and perspective are both essential elements, it is well to bear in mind that the increased emphasis placed on one will have a negative effect on the other.

One way to overcome these impediments is to find common ground. This means identifying issues which all parties concerned can agree to be of importance. This will provide the motivation to try unconventional approaches. If the problem is presented as being fairly complex, people will see a way in which they can contribute. (Wilbanks, 137) Aune, Sack and Selberg are structural engineers, yet they have investigated stave churches ("stavkirken") in Norway. Their published report covers structural development from pagan temples to preservation measures today, and includes topics of history, archaeology and construction.

These observations on the nature and problems of interdisciplinary research have been brief with regard to

the subject itself. They do, however, outline the milieu in which interdisciplinary research takes place and point out some of the reasons so little of it has been done up to the present day. It is hoped that this study will serve to narrow the gap between two disciplines (Historic Preservation and Archaeology) and to provide a framework for further investigations.

HISTORIC PRESERVATION

Historic preservation, as the term is used here, is a discipline in its infancy. Although there were efforts to preserve a number of Revolutionary War sites in the aftermath of the Centennial Celebration in 1876, it was only in the 1930s that the idea of preserving structures within their contexts began to gain favor. The motives at that time were born of national pride. This section will define the term "historic preservation," and examine how that definition has changed over time. This section will also examine the methodologies used in the study and in the execution of preservation projects, and the goals to which preservation aspires to attain.

The term "historic preservation" is itself a source of discussion. (Fitch:39) "Historic" has taken on a broader meaning over the years, and sites connected with the American Revolution or the Civil War are no longer the major foci of effort. Many sites of local, architectural, or ethnic significance have now been included under the umbrella of "history." "Preservation" may more accurately be referred to as "curation," since the sites are not (and cannot be) isolated from the environment. Curation refers to the management of a site, and may include regular maintenance, periodic repairs or the imposition of access

limitations. The term is more commonly used with regard to museum collections, where temperature, humidity and light can be tightly controlled. Sites exposed to the natural environment require that its effects be mitigated to such an extent as is possible. The inevitable effects of weather, time and human activity should be managed, but they can never be entirely eliminated. "Preservation" is the term in common use, however, and will be used herein to acknowledge the broadening scope of the discipline.

Why we preserve things (e.g. buildings, books, art) is fairly simple: these "things" constitute our collective memory, whether as a nation, ethnic group or family. What and how things are collected is decided through social mechanisms, which may or may not be guided by statutes. The artifacts that we collect and preserve are tangible proof of our existence and reminders of our shared heritage. We live in a country that is made up of a diverse accretion of perspectives, and these are reflected in many aspects of our daily lives. Although these reflections include the types of foods we eat, the clothes we wear and so forth, the focus here will be the built environment. It is important, however, to remember that all of these aspects of daily life are intertwined, and that the preservation of any one outside its context should be carefully considered. This introduces the

concept of "human scale" in the present context, which refers to the ways in which people relate to the environment as a whole.

The scale of the artifacts (i.e., "things") to be preserved refers to the size or extent of the artifact. Fitch (1982: 41-3) defines five levels at which preservation of the built environment can take place: historic town, historic district, outdoor architectural museum, historic building, historic house museum, and historic rooms in art museums. The first two of these are referred to as "historic spatial modules." Implicit in this term is the awareness of an interactive environment in which the preserved artifact (or artifacts) exists. In these two cases he avers that "...the objective of preservation policy should be to maintain the physical and aesthetic integrity of the module, on the one hand, <u>and</u> the well-being of the resident population, on the other." (Fitch:41) It is clear that he is concerned for the intangible aspects of preserved artifacts as well as their physical forms.

The historic town is exemplified in this country by Williamsburg, Virginia. While there are others, this is the one example that is almost universally known. It is a restoration, however, and that carries with it some possibility of inaccurate depiction. It is important to

remember that our perceptions of history are subject to constant revision, as one look at a c.1900 American History textbook will demonstrate.

Harrisburg, Vermont is an example of a community that somehow was missed by "progress" and survives in an unspoiled rural context. Today, in the hinterlands of the country, other examples of such rural modules survive. They, like Harrisburg, provide opportunities for preserving a way of life that is quickly vanishing in the face of rapid urbanization, and the abandonment of whole communities. Such communities are complete artifacts: microcosms which contain all of the necessities to live in their own environments. Due to the expense of management, historic towns are generally administered or subsidized by the state or federal government.

While the town is the largest historic spatial module, the historic district is more commonly encountered. This consists of an area within a modern city that has been set aside to commemorate the city's past. It still functions as a viable economic community, whereas historic towns often do not. This area is commonly several blocks which have been established by the local authorities by zoning, tax relief or any of a number of other strategies to ensure that they retain their character. While this tack is common to preservation, it is not

expected from archaeology. Archaeologists are seen to deal with the past and the dead, and their contributions to the living are less easily perceived.

Outdoor architectural museums, such as Henry Ford's Greenfield Village, consist of old structures that have been moved to a large site and reassembled in juxtaposition to one another. This may be done very well or very poorly, of course, but they serve the purpose of preserving buildings that often would not have survived.

The historic house museum is quite common around the country. Often, these represent the upper-crust's way of life and are associated with some famous person or event. Today, these are also coming to include the tenements of factory workers, the cabins of slaves and entire farmsteads.(See Schlebecker and Peterson, 1972.) They illustrate the lives of average families and make the past more accessible. Archaeologists can fill in the blank spots in a this type of museum and provide preservationists better educational information and a more accurate representation.

The historic room is losing popularity, but still retains a place of importance. The current thrust is to keep these rooms in situ, but such is often not possible. The original trading room of the Chicago Commodity Exchange is a case in point. Although one may argue about

the reasoning behind it, the fact was that the exchange was being modernized and the remodeling precluded in situ retention of the room. Therefore the room was moved and preserved as a symbol of Chicago's importance as a trading center, its importance to our heritage as a trading nation, and as a beautiful example of the art of the architect and craftsman.

Having discussed the nature and aims of historic preservation it will be wise to examine the environment in which it takes place. This environment is political as well as physical, and the two are not entirely separable.

The Political Milieu

The process of historic preservation is fundamentally a political one when the property in question is publicly owned. Structures to be preserved are also often privately owned, and the privileges of ownership are deeply entrenched in this country. As a result, the various levels of government may be deeply involved in historic preservation and provide a vehicle which allows the rights of individual ownership to be respected, but which keeps the preservation process moving along.

The basis for the modern preservation movement is, in this regard, a statute: The National Historic Preservation

Act of 1966 (Amended, 1980). This act serves to broaden the scope of historic preservation. John Fowler quotes from the act (Stipe & Lee: 41): "...the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people." Implicit in this statement is the continuation of vital processes within the scope of preservation. Thus, the focus shifts from static buildings to communities and threatened lifestyles. Amish and Shaker communities have been traditionally considered by Americans with such an attitude. These communities are accepted (or at least tolerated) because they strike a responsive chord in us as a people. Under the auspices of this act a number of other communities have come into being or been protected from the incursions of the modern world. It should be noted that there are aspects of these communities that are de facto defined by the federal government through the wording of the act. As such, this situation is not completely community based, but it is a practical solution.

Additionally, the people who live in the area under consideration for preservation should have their rights taken into consideration. "Gentrification" is a term that is often heard with regard to the redevelopment of urban neighborhoods. It refers to the buying, remodeling and

occupation of old (usually decrepit) buildings by up-scale owners. This has the effect of raising the costs of living in the areas concerned. By improving a property, the new owner raises its assessment, and therefore its taxes. This is reflected in the valuations of other properties in the area. The resultant higher taxes on the properties raise the costs of owning the buildings, and consequently the rents. This often forces the residents to find affordable housing elsewhere, and destroys the present character of the neighborhood. Often, these neighborhoods reflect an ethnic heritage that is considered worthy of preservation in and of itself. The deciding factor, then, is economic in these cases without some form of intervention. By providing incentives to property owners which allow these people to remain as communities, the "melting pot" of American society can often be maintained. (See Newsom)

To aid in preservation, the federal government has made it possible for governmental (and other) entities to provide benefits of various sorts. These generally take the form of economic incentives for local initiatives. The basis for benefit accrual to property owners is the Secretary of the Interior's Standards for Preservation Planning, Identification, Evaluation and Registration. By applying these standards, an entity may become "certified"

by their State Historic Preservation Officer, and thus become eligible for grants-in-aid, tax abatements, or any of a number of other assistance programs administered by any or all of the three levels of government (Federal, State, and Local). It should be emphasized that the Secretary's Standards are a beginning point for consideration and that they are rather strict. Further, property taxes are collected at a local level and are not directly affected by the federal government. The point is that the three levels of government all have roles in the process, and that certain restrictions will follow to qualify for their support.

As a result of the passage of the National Historic Preservation Act of 1966, the federal government has taken the leadership role in historic preservation. In 1967 Office of Archaeology and Historic Preservation (OAHP) was formed within the National Park Service in the Department of then Interior. Since then a number of other agencies have been formed to aid in identifying properties, establishing criteria, providing technical assistance and providing incentives. These all have behind them the full weight and force of the federal government, which helps to protect properties from harm. There has been a trend among these agencies in recent years toward integrating archaeological and preservationist perspectives and goals.

This is a reasonable organizational move on the part of the Department of the Interior, and it will also influence the course of academic growth and investigation in both fields. An independent Advisory Council on Historic Preservation has also been established to provide third-party perspectives and advice to federal government agencies, as well as to coordinate U.S. participation in international agreements and intergovernmental associations. Its role in the formation of administrative procedures for the governmental agencies has influenced the shape which preservation has taken.

The shape of the present federal role grew out of the environmental movement in the late 1960s and the 1970s. Grassroots organizations grew up with varied interests, and they developed into the PACs of today. The Audubon Society, for example, trys to influence governmental agencies through lobbying activities. There is a natural affinity between the preservation of historic sites and the natural environment, but the respective constituencies of these movements could not see their ways clear to cooperation and comity of interest. This is important to remember since a study of the lessons learned from this missed opportunity would be quite useful in the present circumstance.(See Fowler in Stipe & Lee: 42-44.) By building bridges and political mechanisms for combined

effort, historic preservation and archaeology may be able to transcend those failures. The internecine rivalries of that period spilled over into the preservation arena, and only now are the wounds beginning to heal. The Audubon Society, for example, is presently involved in the acquisition of the 11,000 acre Z-Bar Ranch, in Kansas, as a combination national monument and wildlife preserve.

The bulk of responsibility for historic preservation lies with the National Park Service. This responsibility is currently divided between eight divisions: the Archaeological Assistance Division, the History Division (National Historic Landmark Program), the HABS/HAER Division (Historic American Building Survey/Historic American Engineering Record), the Interagency Resources Division (National Register of Historic Places and coordination), Preservation Assistance Division (tax incentives and compliance oversight, technical briefs), the Park Historic Architecture Division, the Anthropology Division, and the Curatorial Services Division. The last three are primarily concerned with the operations of the national parks themselves, but the results of their work are used as benchmarks by many other, similar bodies. Other federal agencies bear on historic preservation from time to time, including the federal courts.

The basis for the full weight of the protection of

the federal government is entry in the National Register of Historic Places. To qualify, a prospective listing must meet certain criteria:

- the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and;
- that are associated with events that have made a significant contribution to the broad patterns of history; or
- that are associated with the lives of persons significant in our past; or
- that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- that have yielded, or may be likely to yield, information important in prehistory or history.

Expansion of these basic criteria make them quite comprehensive, and rather difficult for the average con-

cerned property-owner to meet. The several layers of bureaucratic review tend to sort nominees out at their respective appropriate levels, with only the select few rising all the way to the top.

Section 106 of the Preservation Act of 1966 requires that federal agencies whose direct or indirect actions may affect historic properties take into account the effects of those actions on said properties. Basically, the steps that they follow are identification of historic properties, evaluation of the significance of potentially affected properties (through the Advisory Council), evaluation of the nature of those effects, consultation with experts, and obtaining the Advisory Council's advice before proceeding. These are essentially the same steps that Stipe notes in the preservation process: locating the resource, evaluating the resource, and applying the appropriate protective measures to the resource. Naturally, within the government there is a more involved accountability sequence since there are many resources to track and less personal involvement on the part of the civil servants with each individual project. This is simply the nature of the workplace and no reflection on civil servants in general. The point is that the same basic steps are followed regardless of the resource or the entity involved with it.

For the states, the Preservation Act of 1966 provided a uniform framework in which to plan their own programs, and some federal money with which to pay for them. In order to participate in the assistance programs provided for in the Act (including the amendments as of 1980), a state must:

- identify and research historic, archaeological, and architectural properties;
- nominate properties that meet the criteria to the National Register;
- prepare statewide, comprehensive preservation plans;
- assist other states and local governments with their responsibilities in cooperation with the President's Advisory Council on Historic Preservation;
- administer grants-in-aid for surveying, planning and development projects; and
- provide education, training, and technical assistance.

These are weighty responsibilities for some states, and some decisions need to be made as to how fully the criteria can be followed in these tight economic times, but support from local and volunteer groups help make up

the difference. Each state has a State Historic Preservation Officer (SHPO) with whom reports are filed and who is responsible for coordinating the efforts of local and federal entities. These officers are quite literally in the middle of the fight for historic preservation, and their role is changing as a result of the shifting responsibility for preservation onto the states.

Each state maintains its own register of historic places, broadly along the same guidelines as the federal program. Obviously, each state will evolve a unique program which serves its own needs, but the federal model provides a guide to use as a basis on which to proceed. Frequently, sites and resources which lack standing on the national list will find an honored place on that of their respective states. Surveys are conducted on a local level and reports collected by the SHPO, whose office also provide the advice and assistance prescribed by the federal government, and thus become involved in administering grants of federal monies.

Other state assistance programs include tax incentives, the use of easements and so forth. As to this last, the American Bar Association has proposed, and several states have adopted, the Uniform Conservation Easement Act as an attempt to standardize and simplify easement legislation intended to preserve prehistoric and historic resources.

In order to facilitate the collection of information at the state level, state governments make use of the establishment of local preservation organizations. In the 1980 amendments to the Preservation Act of 1966, a more standardized form was given to these organizations by the Certified Local Government Program. The Procedures for Implementation of Certified Local Government Programs in Kansas was published in January of 1985. Benefits which derive from such certification include assistance in the acquisition of funding and expertise. It outlines the requirements for participation for local governments, which are, briefly:

A. The local government must enforce appropriate state or local legislation for the designation and protection of historic properties.

B. The local government must establish an adequate and qualified historic preservation commission through a local ordinance.

C. The local government must maintain a system for the survey and inventory of historic properties.

D. Local governments shall provide for adequate public participation in the local historic preservation programs, including the process of recommending properties for nomination to the National Register.

E. Local governments shall satisfactorily perform the responsibilities listed in points A through D and those others specifically delegated to them under the Act by the State Historic Preservation Officer.(P. 4-8)

This publication also provides guidelines for certification and decertification of local governments, as well as for transferring funds and for selecting local government projects for funding. Appendices provide definitions of terminology, copies of applicable statutes, survey standards and instructions for completing the Kansas Historic Resources Inventory form (also included).

In many ways the local, grassroots level of historic preservation is the most important. Regardless of what may or may not be done at higher levels of government, this is where the action is, since this is where the resources are. Through the use of local ordinances, property tax incentives, administering revenue sharing funds, and enforcing zoning restrictions and easements, the local governments exercise direct control over the process as it actually occurs. Lack of understanding and lack of funds limit the scope of the process, however, and very little archaeological work has typically accompanied these local initiatives.

One of the most effective means of exerting local

control is through the designation of a historic district. This involves the decision that a segment of the community is itself representative of some of the criteria which designate an historic place, and implies that the whole is greater than the sum of its parts. Thus, the designation of such a district can affect a large area and have a profound effect. These ordinances, then, must be written very carefully, since they are concerned with control by the municipality over private property and have important political overtones.

An important site, whether inside or outside such a district (or in the absence of such a district), may be designated a landmark.

Whether district or landmark, though, these designated sites must be overseen, usually by a commission set up for that purpose. Its responsibilities will vary, but it will have to set guidelines, approve changes to existing structures, etc. Its advice will be sought in zoning changes and appeals, and it will be regularly challenged at open meetings and, possibly, in court. It will also be involved in the initial and subsequent surveys which will need to be conducted.

Private owners who are intent on preserving their property in perpetuity may exercise their options as well. These usually take the form of deed restrictions and

protective covenants attached to properties. Through such devices, future owners of the property will be bound to maintain the property as it is intended by the current owner. Thus, a new owners may not attach a corrugated plastic greenhouse to a Queen Anne residence if forbidden. Since subsequent owners accept the terms of the deed when purchasing the property, they are bound by the restrictions as by any other legal contract. The problem in this case is one of enforcement. An owner may ignore deed restrictions if no one forces adherence. In Kansas, the unlawful use of a property by another for a period of 17 years creates an easement, and this principle may be applied to attempt to break a deed restriction. Therefore, deed restrictions should be widely publicised and should certainly be made known to local historic (and other) associations. The government is not obliged to constantly review deeds to ascertain whether or not their provisions are being adhered to, but it must act if an inappropriate use is challenged in court and the judgement falls to the plaintiff.

Historic Preservation Survey

The first order of business for applicants for aid is to inventory their area for structures which may qualify for inclusion under one or another program. This should be done whether or not funds are to be requested. This inventory will certainly include the most notable buildings in the area, but should also include other landmarks of local importance, including archaeological sites. Howard Marshall (Stipe, 1980: 43ff.) illustrates this concept in his discussion of cultural preservation and "folklife." This term acknowledges the contribution made to American life by the average citizen who lives in a community of people that may have remained relatively self-contained for generations. With the emphasis on mobility and change in modern America, we often forget that there are small nodes of people who maintain the traditions of their fore-bears with a great deal of pride in the tradition. There is also a need to preserve examples of change, both in the landscape and on the people themselves, by integrating tradition and change in socially non-disruptive ways.

In order to provide an inventory of resources, a survey must be conducted of the area. The National Park Service is entrusted with administering the historic

preservation program for the federal government. The Park Service distinguishes five broad categories of historic resources: buildings, sites, structures, objects and districts. A survey should be planned, then, to discover resources that fall into these categories, each of which will include a number of resource genera. Archaeological features are classifies as "sites" under this scheme, and are included in surveys as such.

"Buildings" includes groups of buildings. They do not have to possess notable architectural merit to be included under this classification, although they may. They may be associated with a particular person, social or technological development, or provide a physical record of the development of an area or social/ethnic group. Changing aesthetics over time are often reflected in buildings as they are adapted to new uses and tastes, including the relationships between buildings in groups. An aesthetic may dictate changes at one time that are deplored at a later date, and the dynamic of a historico-aesthetic relationship should be kept in mind.

"Sites" includes archaeological sites. Since the National Park Service is responsible for the archaeological investigation of such sites, it is only common sense for it to be concerned with the discovery of such sites. Thus, it is through a bureaucratic necessity that historic

preservation and archaeology are first brought together in a meaningful way. This ("site") classification not only includes sites of obvious archaeological importance, but also those of cultural importance which may have limited archaeological value or may still be in use. The local people or ethnic groups in a geographic area will attach preferential importance to those sites which they associate with their history, cultural development or religious beliefs, including cemeteries and shrines. Constructed landscapes, such as parks and gardens, may also be included, especially as they exemplify trends in the development of landscape architecture. Historically important shipwrecks are included under this heading.

"Structures" includes aqueducts, granaries, bridges and the like. These are not necessarily buildings, as such, but may be important adjuncts to the buildings and their environments. Such items as ships, carousels, and artillery pieces are also included under this designation.

"Objects" are comparatively small evidences of human activity that are important to historical research. These may be as small as a milepost or as large as a cliff-face covered with petroglyphs. Often these objects are associated with a specific spot and are landmarks for the community.

"Districts" are the largest of the Park Service

classifications. These may range from a small cluster of buildings in an urban area to an expanse of many square miles, such as the Erie Canal or a farmstead of many acres. The basic criterion is that the landscape in question have been shaped by historical processes and retain visual and cultural characteristics indicative of that process. The component elements do not necessarily need to be contiguous to be considered a district. A series of archaeological sites in a stream valley or the stops on a pioneer trail may consist of distinct sites, but can present a unified whole.

Goals for a survey must be set before work can begin in earnest. These goals should be both short-term and long-term and should define the parameters of the survey, what will and will not be included. Short-term goals will involve current and up-coming plans, such as the mapping of an area or a review of land records, which the long-term goals will interrelate. The nature of these goals will depend on the circumstances of the survey, and background information is available in the National Register Bulletin No. 24, Guidelines for Local Surveys, and HCRS Publication No. 45, New Directions in Rural Preservation.

Another step is the historical survey, which may take several forms, depending on the information available. Local histories are likely places to begin such a survey,

with the aid of state and local historical societies. Both state and local societies have their respective advantages and disadvantages, and care should be taken to use each body of resources to its fullest.

Archaeologists are often interested in sites that will not be included in historical records, but references in old diaries and newspapers can be important clues. The signs that may have marked an Indian camp slowly disappear over time, and old references may point to new discoveries of obliterated sites.

The focus of the state society will tend toward topics which had impacts on the people of the state as a whole. Thus, the collected papers of a Senator or a Governor will likely be found in the state archives. Archaeological records are kept by the state's archaeologist, including site locations and records of the artifacts recovered. Similarly, plans for large construction projects, such as highway and railroad systems, will be housed with the state historical society as well. When railroads were buying land or otherwise gaining rights-of-way across the country, they were reliant on accurate surveys of the land to be traversed. Often, these were based on federal survey maps, but they were also left on their own in many places due to inadequate or non-existent government maps. The survey maps of the railroads are a

valuable tool with which the settlement patterns of the day can be reconstructed, and a specific locality can be related to the rest of the state and the larger whole. Settlement patterns are important to the archaeologist in discerning economic and social linkages. These linkages help to define how the settlers interacted in their day, thus they are important for a proper understanding of the past and its preservation.

Caution should be employed in the use of railroad maps, however useful they might be. The railroads were actively recruiting settlers along their rights-of-way to ensure adequate business for their lines. As a result, not all of the towns described by their maps actually existed, particularly in the west. On the other hand, the lines of the track can be used to locate long-vanished rail-heads for archaeologists. These short-lived settlements were unique phenomena whose existence was determined by the rate of progress made by the track-laying teams; once a section of track was completed the team, and the town, moved on. Preservation of these settlements reflects the ethic of preserving transient structures such as slaves' cabins, and most of these settlements can now only be found through archaeological investigation. Finally, it should be noted that, when using any old survey, the aims and motives of the original surveyors must be taken into consideration.

In Our American Land (1987), the Department of Agriculture's Yearbook of Agriculture, special attention is paid to two basic types of surveys. (P. 43-47) The first is termed "irregular" or "metes-and-bounds." This is the oldest type of survey conducted in the Americas and reflect the need to establish ownership or responsibility for areas of land granted by a European king, often through his governor, alcalde, etc. In this type of survey the extent of specific plots of land were described in terms of natural features, such as rivers or mountain ranges. These plots of land were often sub-divided according to patterns familiar to the immigrant peoples, such as by measured distances along a road or river which extended perpendicularly until abutting some obstacle or other land claim. Likely use patterns of a particular group may often be deduced from examination of archaeological records from the immigrant homeland, which will also be likely to provide information on arrangements of buildings on farmsteads and the arrangement of the farmsteads themselves. The irregular pattern developed through such use of metes-and-bounds surveys is often seen imposed upon the later "rectangular surveys" conducted by the U.S. Government.

The rectangular survey is the predominant type used over 70% of the United States (Ibid.: 45) and is based on

the Land Ordinance of 1785. Before settlement officially began in an area, a meridian and baseline were established in alignment with the cardinal points of the compass. Next, a series of townships were surveyed, each measuring six miles on a side. These were divided into 36 sections of one square mile each, or 640 acres. In this way land could be allocated as smoothly as possible and taxes levied with relative uniformity. (See also Surveying Our Public Lands, and Lappala.)

The information gained by analysis of official maps is only as good as the maps themselves, and they are still being revised. Not only have cartographic techniques improved, but the courses of roads and rivers change over time and these changes affect the patterns and ways of life in the areas concerned. By careful analysis of the information contained in old surveys, and healthy doses of scepticism and objectivity, a great deal of information can be gained to help plan a preservation survey.

A basic knowledge of maps and their uses is also necessary in the registration of sites outside a community's limits. National Register forms provide space for both a verbal boundary description and UTM references. UTM references provide specific distances north and east of a reference point within a particular zone, and can be extremely accurate. The maps generally used to locate

properties are published by the U.S. Geological Survey and are available through both private and governmental agencies. (See Joukowsky: 39) These maps are also used to precisely locate archaeological sites, which enhances the potential to share information between the disciplines (preservation and archaeology) by providing a common descriptive base for information.

On the local level, one finds a wealth of information as well, but it may be less easily obtained. Many counties (or parishes) have well maintained museums, archives and the like. Often, however, fires, floods, or violence have destroyed important information. This information cannot be replaced, but it may often be inferred.

One source of local information is the Office of the Registrar of Deeds. In this office are records of all property transactions from the inception of the legal entity (county or parish) in question. (It is true that these, too, may have been destroyed, but it is well to consider all alternatives.) By looking at the series of owners of a property, and the patterns of their succession, a history of a property's development can be worked out. This may then be enlarged upon at the Assessor's Office and library newspaper morgues by an examination of records for the property (or its owners) to see what was

built on it and when. Many properties have gone through a number of uses over the course of the years. This is termed "land use succession." When a piece of property is found to be useful for a new purpose, due to some change in the physical or social environment, the old use to which it had been put will often be supplanted. This change in land uses reflects our heritage as one of change, and this change is reflected in the built environment that has survived until the present day. By gaining an understanding of these changes in a particular area an appropriate survey plan can be developed.

Other sources of information will include records of births and deaths, probate cases, records of building and investment companies, and planning or engineering offices within the local government. Analysis of the information gained from these sources can yield information which will form a coherent picture while pointing out gaps that may require special attention.

A crucial source of information for survey planning is individual informants. These are people who live in an area and are familiar with it. They have a specialized knowledge of places and events which were often not considered important enough to have been recorded. A favorite swimming hole for youngsters of the 1920s is unlikely to have been noted on any maps or descriptions, but it was

very important to the community at the time and its location was common knowledge. Today, the children who swam there are in their sixties and seventies and they represent our only source of information about its location. Any surveyor needs to plan for interviews with the community's older residents to ascertain the locations of such transitory sites. It may be the case that a building is known historically only by a single photograph, taken at a specific moment. It is not to be assumed that the photo is representative of the building as it was known to the community. Such photos were often taken shortly after completion of the building or to commemorate an event, and show it in a state that is decidedly uncharacteristic of its use; additions, rennovations and later modifications may well have been more representative. In Williamsburg, it has recently been the case that some regular maintenance has been foregone purposely in order to allow for a more accurate depiction of the environment as it actually was, rather than as we idealize it to have been. Preservation which preserves only the pretty side of life does a disservice to the past, and the use of informants in a community can give the researcher a more accurate view of the reality. Again, caution is advised. It should be remembered that total accuracy is not assured by the use of informants alone. Memory is transitory and selective,

and it often reflects deep-seated emotions or beliefs of the party being interviewed. The study of oral history is oriented to deriving information from such sources. This aspect of the survey in particular should be given over to oral historians, who are skilled in the retrieval of such information. Organizations such as the American Folklife Society and the American Folklife Center of the Library of Congress can provide information on resources and techniques, and universities in the area may be able to provide personnel.

The physical survey of an area consists of several parts, and its success will depend on the thoroughness and integration of those parts. This phase of investigation is common to both archaeology and historic preservation, and both will be described in this work. This section focuses on historic preservation and archaeological surveys will be covered in that section, but both have common elements and techniques which may be interchanged and should be interrelated. A good beginning will be the "windshield survey." (Parker: 35-36)

The windshield survey consists of driving up and down each street, road and alleyway, noting all buildings and structures of interest to the survey that can be seen. This type of survey is limited to elements that are visible from the roadway, and care should be exercised to correlate information with other sources.

In conducting a windshield survey two or three people are selected, one to drive and the others to observe. The observers should include someone who has a background in historic architecture to ensure that adequate descriptions are made, particularly with regard to local architecture types. It is also useful to have a member who is familiar with the area in order to elaborate observations, and to cover the possibility that important, unobservable features may be noted. These will often relate to the social characteristics of the area.

One important result of the windshield survey will be to delineate the boundaries of the areas that may deserve more thorough investigation. The boundaries of these areas may also turn out to be appropriate limits for any historic districts that may later be established. In any case, the bases for recognizing boundaries should always be specified. The notes resulting from a survey of this type should include:

- the kinds of properties looked for, defined by the survey goals;
- the boundaries of the area surveyed;
- the methods and limits of investigation;
- the area's general description;
- the socio-economic and other characteristics of the area;

-the character of the architectural environment of the area;

-all data related to the kinds of historic buildings encountered;

-the locations of historic buildings and groups;

-the locations of areas apparently barren of interest to the survey.

One might add that this is also an excellent opportunity to identify potential archaeological sites, whether or not they relate to preset goals. In this respect, the utility of goals may be reflected in the relative ease with which they are adapted to changing circumstances while maintaining the function of guidance.

Once the general layout of the area under consideration has been ascertained, the documentation of potential sites may begin. These should include sites of state and local importance as well as potential nominees to the National Register, and only sites that do not meet criteria previously agreed upon should be excluded. Additionally, the landscape of the areas surrounding potential sites should be described. These may include gardens, trash pits, adjacent fields or lots, or other spaces which are definable within the broad criteria previously established.

The specific forms used for these intensive surveys

of sites will characteristically be of the type supplied by the State Historic Preservation Office. For those sites which may be eligible for nomination to the National Register it will be advisable to refer to How to Complete National Register Forms (National Register Publication No. 171) and to follow those guidelines. Updated versions of the rules and proceedures for nomination may be obtained through the State Historic Preservation Officer, and should always be complied with to the letter. (Ideally, the rules and proceedures of Bulletin No. 171 will serve as a minimum basis for information retrieval, since additional data will be noted and should be recorded.)

The aims of the intensive survey are two-fold: to form a detailed report and inventory, and to document the results graphically. Ideally, architectural sketches should be made of structures and elements described. A preliminary surface survey of archaeological features is most economically performed at this time as well, and a map of the site should be drawn up which locates everything precisely. While the time and and expense of detailed drawings may make them unfeasible, photography provides another means of documentation. A number of photos should be taken of the elements to be described well beyond what might be thought necessary, since it is better to have them and not need them than the reverse.

These should be of as large a format as possible, and at least 35mm. They should show specific elements as well as their physical context, be it a field or a city street.

There are a number of items of information that should be noted for each property, whether it will be nominated to the National Register or not. Those of particular importance to such a listing are noted below. (See Parker: 41-47)

Resource name: This refers to any historical or commonly used name which designates the property.

Address/Location: If in a town, the street name and number, otherwise a site number (See the State Archaeologist.) or other designation. Also include any restrictions on this information.

Classification: Owner National Park Service Classification, number of contributing and/or listed resources, and any multiple property listings.

State or federal agency certification, if any.

National Park Service certification., if any.

Historic and current functions or uses.

Description: This includes architectural classifications, materials, and a description

of present and historic appearances.

Statement of significance: his describes the level at which evaluation has taken place, the applicable National Register criteria, significant associated periods or persons, and the architect and builder.

Major bibliographical references: These are books, articles, and previous descriptions or documentation, including the location of such material.

Geographical data: These include UTM references on a Geological Survey map, acreage, and boundary descriptions and justifications.

Identification of the person who prepared the report: This should include name, address, telephone number, organizational affiliation, and the date.

The foregoing summary of required information serves to outline the scope of the survey. Additional maps, forms and miscellany will be needed to conduct a survey, and their nature will depend very much on the specific situation. The important thing is to record as much data as possible in a standardized and organized fashion so that it will be available and complete when needed.

The organization of such data involves a large field

which need not be discussed in detail here, and many approaches are used around the country. Modern computer technology provides the possibility of a much broader data base, widely available, which might be attained through the design of data base programs and forms. This would require the cooperation of many interested parties to produce useful forms and software, but the task should not be insurmountable. Due consideration for the varied needs of the parties involved should suggest several workable systems, but the largest problem might be that of getting people to use the selected system properly.

Evaluation

The evaluation of a historic property or site that has been identified by a survey must take place before the actual work begins on the project. Evaluation of a property will provide the basis for planning its eventual use, and will involve several factors. These will include the historic context, the existing remnants, possible uses after work is completed, and available evaluative resources. They will also involve the Secretary of the Interior's Standards for Historic Preservation, which form the basis for all preservation work that involves the federal government, including tax relief to private citizens. They are also used to determine the eligibility of properties and projects for tax incentives, grants, and sundry aid programs that are widely available through federal agencies. Since these standards have been arrived at through consultations with State Historic Preservation Officers (see the Standards: 1), they also form the basis for many state programs. As a result, these standards are representative of a minimum to aspire to, whether or not they may be achieved. Many projects may not be eligible for inclusion on historic listings but will still merit preservation on the basis of local values and historic associations. In these cases, the standards may provide direction, but the final decisions will be made locally.

The historic associations of a property include its development from inception to present state, including any persons of note who may have been connected with it. For example, a port will find that its layout of streets reflects the contours of the harbor or river that it once served. Additionally, in the case of a river port, the layout may reflect a river-course that has changed dramatically over the years. Another example might be that of a farmstead that was established by an immigrant farmer, passed on to his son, sold to someone of a different ethnic heritage, and finally abandoned or absorbed into an urban expansion. There are a myriad different histories which may evolve out of archival and first-hand research, and they should all be considered in evaluation, insofar as they have had an impact on the development of the property or associate it with a historic or famed person.

The existing remnants of a property need consideration. Such evaluation will involve looking at the foundations and the structural integrity of standing buildings, the incursions of modern easements (for water, etc.), and any aspects of the development of the property that are indicative of the historic context. Often, details of a building will have been removed at some point, for one reason or another. These details need to be identified and specified for possible reconstruction. (Note: Details

of construction may or may not identify a particular period, but they are also important.) The way in which structures contribute to a property is an important consideration in itself, and analysis of them may reveal hitherto unknown aspects of the property which deserve consideration as well. It is in these respects that archaeological investigations may provide their most obvious benefits.

In dealing with existing remnants, the Standards are conservative: the repair of architectural elements is preferred to reconstruction. Methods of repair are also prescribed, and alternatives given in many cases. Certain procedures are proscribed as well, such as sandblasting and the replacement of historic materials with incompatible modern substitutes (e.g.: vinyl siding over clapboard). "Conservative," in fact, takes on a double meaning in this context, since the Park Service's approach is one of curatorial conservation such as might be expected to be applied to an archaeological artifact or a work of art. In this sense, the National Park System acts as a huge open-air museum of structures and sites that are maintained *in situ* as parts of the national heritage. It should be emphasized that the National Park Service is no museum, but simply functions as one, *de facto*, within this limited context.

Executive Order 11539 directs all federal agencies involved with any historic property (or potentially historic property) to take steps to ensure that no unwarranted destruction of the properties should occur. While the order is not all-inclusive, it does mandate that three steps be followed:

1) that projects be preceded by an inventory of historic properties that might qualify for the National Register;
2) that agencies should exercise caution prior to the listing of those properties to ensure that unnecessary loss or destruction does not occur;
3) that agencies adopt policies that would contribute to the preservation of historic properties on non-federal land. (King, et al, 1977: 37)

While other regulations have been adopted since E.O. 11539, this order embodies the basic principles which serve to guide federal agencies in general. This is not to say that they are employed as universally or as conscientiously as they should be, but their aim is clear, and some circumspection has resulted. There is, then, an obvious element of politics to be considered, and one will ignore it at peril since the juggernaut of government often acquires its own dynamic. On one hand, a portion of

the Manassas Battlefield caused the construction of a shopping center to be blocked; on the other hand, the site was nearly deemed "not significant enough" to be preserved. The final decision was of an undeniably political nature.

The evaluation of existing structures entails the documentation and composition of the standing elements. Many structures were built with technologies that have been neglected during the intervening years. Decorative metals were very popular in the previous century, for example, and there are still cast-iron storefronts and stamped-metal roofs and ceilings to be found. The installation and upkeep skills for these architectural details have languished, and today only a few people possess knowledge which used to be nearly universal in this country's building trades. Proper appreciation of these sorts of materials, and their applications, is important to ensure that they are not destroyed in ill-advised attempts to preserve them.

For example, a proscription in the preservation community is that of sand-blasting...and with good reason. Sand-blasting is a method of quickly cleaning a surface of its paint or grime covering by abrading it with sand or other fine particles impelled under pressure. An alternate method is to use high-pressure water jets. Both

methods clean the surface, it is true, but they also clean away the surface: the glazing of bricks, the mortar from joints, etc. Often, the brick wall to be "restored" was meant to be painted from the day it was erected. (Hawkes: 205-7) Porous brick, in fact, will not survive the elements even if the paint can be removed safely, nor was it meant to. Thus, an evaluation must consider such possibilities in order to appropriately deal with them; there are cases when sand-blasting is unavoidable and appropriate, though they are rare.

Old technologies will often be intimately involved with the historic context. The iceman who made his rounds every couple of days is gone from the American scene, but the few iceboxes that remain are testament to his importance in the lives of the average families of the day. Similarly, coal is rarely used to heat our homes today, but the coal bunkers and coal chutes that still exist in many homes are, again, mute testimony to its near universality at one time. Such technological aspects of life, and their social repercussions, need to be evaluated in any preservation project, and a restoration plan for a period seventy-five or a hundred years ago will likely need to incorporate access to the coal chute. This is particularly true in coal producing areas, but the same considerations are appropriate for other areas where

emphasis may have been on a pile of wood or "buffalo chips."

It need only be mentioned that these technologies are not always practical for day-to-day reliance. They do reflect the ambience of a period, however, and should be considered for incorporation in a rehabilitation project. In such circumstances, there are many modern adaptations which may up-date old technologies to today's standards without sacrificing that ambience of antique appliances. (There is currently being marketed a Cathedral-style radio which is true to form, but which contains an AM-FM, cassette player in place of the old tube receiver.) It is important to understand the technologies applied by builders in order to properly care for a structure. It may be the case that uncovering a plastered-over transom will allow better ventilation; that higher ceilings will keep one cooler in the summer, and keep the air fresher in the winter. The key is to understand why and how things were done in order to make the best use of what is still there, or to accurately replace what has gone.

Based on consideration of points of the foregoing discussion, a plan for preservation may be devised. It will likely involve several considerations, not the least of which will be economic feasibility. Property has value. This value is normally given a dollar amount

(although there are other measures) against which competing uses are measured. This is especially true in urban areas where the market value of land may be quite high and its potential utilization quite intense. As a result, any use which will not be subsidized will have to stand on its own. Private interests may come to the fore in such cases, and many privately owned homes and businesses are located in such structures. These are made viable by certain compromises which are imposed by the exigencies of their situations. In some cases, such as Henry Ford's Greenfield Village, a single wealthy individual may rescue buildings by transporting them to another place. Such radical steps are not always viable, however, and other alternatives must be considered. A more likely solution is that exemplified by the large railroad stations which once served our large cities. Many of these (e.g.: St. Louis) have been reborn as commercial areas that retain the charm of the old structure, but incorporate architectural features that provide for a new, economically viable "adaptive re-use." Old, so-called "Victorian" mansions find new lives as bed-and-breakfast inns or apartment buildings, and preserve the flavor of their neighborhoods on their exteriors while providing modern conveniences within.

Building codes are another consideration for a

preservation project. Like the Secretary's Standards, these provide guidelines for the work of rehabilitation, however there are some important differences as well. The codes are locally imposed and enforced to ensure a secure environment in which to live. They have evolved from experiences with materials and with disasters, and are intended to assure the public that only safe buildings are erected. They cover aspects as diverse as foundations and electrical wiring, and as regionally specific as earthquake survivability. Safety is the reason for building codes, and the public's security should be of the first importance. Inappropriate variances are often obtainable, however, through political or other pressure being brought to bear on the appropriate parties. The recent collapse of buildings in Soviet Armenia has been blamed on inadequate code enforcement, and lax enforcement need not necessarily indicate corruption. From the viewpoint of preservation, however, it is important to devise a means by which the intent of the codes may be adhered to without compromising the quality of the rehabilitation. In this regard, creativity and conscientious compromises are important to achieve the aims of safety and appropriate preservation.

San Francisco, Denver, and the Commonwealth of Massachusetts have all devised examples of workable com-

promises that allow for both safety and preservation. (Feely: 250-260) Mechanisms which allow these compromises include variances on individual properties (such as in Denver) and the establishment of historic districts which have their own code requirements. The latter device is widely used and is more generalized than Denver's alternative, but it is also less costly and time consuming than working out individualized variances. Another scheme is to designate a series of trade-offs for projects that allow, for example, sprinklers rather than requiring that hallways be widened to meet fire codes. Both provide for public safety, but the former is more in keeping with historic designs. (Ibid.: 261-262) The emphasis is on minor design modifications rather than on radical surgery, much as it is in the buildings in the National Parks.

The existing building codes in a particular context may have an effect on the projected uses for a structure. It is also likely that the economic environment in which a particular project takes place. The social context, however, is just as important. In some areas, the needs of a neighborhood will be served best by low-income housing, while the same building in another area may find its best use as a community center. These considerations are important elements in any evaluation, since a project which fails to meet the needs of the people in the com-

munity will likely fail itself. Much of what this involves for the local residents is their "quality of life," as it may be defined in each neighborhood. A project may provide jobs which will allow the workers and their families to accomplish their own plans, which may or may not be in keeping with the goals of the preservation community. This is an area in which education of the public will help to foster an awareness of preservation in a community, and thereby help to avoid such conflicts by making them moot: if people can be involved in neighborhood projects, peer pressure and newly-instilled values may serve to avoid conflicts before they arise.

Situations exist in which the question is not one of finding new a use for old building, but is one of whether or not to have a building at all. Recently, a portion of the Civil War battlefield at Manassas, Va. (A.K.A., Bull Run) was chosen as the site for a developer's planned shopping center. The area had originally been considered to be outside the battlefield area, and was thus outside the National Park. The presence of a shopping development in the immediate area sparked protest, however, and the National Trust for Historic Preservation and other interested parties formed an alliance which ultimately worked within the political mechanisms to expand the National Park to include the mall site. (Sweeney: 1) The evalua-

tion of a landscape as having worth in its own right will be addressed below in more detail, but the point here is that alternative schemes and perspectives should be considered in evaluating a property. A formal garden is as much a part of an estate as the main house and its outbuildings, and the significance of a historic battlefield is somehow diminished in a new life as a parking lot. Parks and open spaces are as worthy of preservation as buildings, and deserve the same care and consideration with regard to the designer's original intent and the current needs of the resident population. The varied interests at stake define another issue to be addressed: whose interests are of primary importance? Economic development cannot be stifled entirely, and it may be desperately needed in an area. On the other hand, the local community may not be willing to pay <u>any</u> price for such development. A balance between progress and tradition must be struck in these cases, and community education to provide for an informed decision can pay dividends to the community in the future.

Preservation is not an event, it is a process. As with any process, this one is constantly evaluated and revised as it continues on any given project. Decisions made without due reflection are often repented later, and prior planning for evaluative review throughout the

process reaps benefits in the long run. The factors to be considered are as diverse as the projects themselves, and evaluation is by nature deliberative and therefore time consuming. The dangers of simply "going through the motions" are real, and may be very costly. A project which relies on an Income Tax Credit, for example, will become an expensive white-elephant if a single phase of the work is done incorrectly or without due regard for the Secretary's Standards. It is important to remember that the bulk of preservation projects attempted in this country are the result of private initiatives, and may have limited resources and funds. It is therefore imperative that proper evaluation take place before a single nail is pulled or shingle replaced (except for cases of stabilization, which must often precede other work). Cognizance of the exigencies which constrain preservation will help archaeologists to better integrate their work into the larger process.

Protective Strategies

Once a property has been discovered and evaluated, a decision must be made as to the combination of protective measures that best apply to the situation. The selection of appropriate measures, in toto, describe a protective strategy. Ideally, this strategy will take into account all variables and allow for all contingencies. An ideal is rarely, if ever, attained, but the effectiveness of a particular strategy will be appropriately measured by its nearness to that mark. In many cases such a judgement will take some years, so it is wise to include a continuing program of evaluation and review of the process.

Protective measures may be divided into two types, here referred to as "political" and "technical." Political measures are characterized as actions of social organizations, whether those be legal, financial, or associational. In a broad sense, politics is merely a process of assembling and coordinating the necessary people and resources for a project, and ensuring their cooperation, if not their outright support. It is in this political arena that archaeologists can benefit most immediately from preservationists' experiences.

Technical measures are those applied to the property itself. These may range from doing nothing at all to

drastic intervention, including the reproduction of vanished buildings and their grounds. These physical treatments may have political overtones, which may surface in the form of opposition from one quarter or another, and the measures thus taken may not always be the best of those otherwise available. A project team should, therefore, have people associated with it who have particular skills in both the political and technical arenas, and who can be called upon to bring those skills to bear should the need arise.

Political methods may range from benign to severe. A benign approach is exemplified in the Preservation Act of 1966, which encourages people to stop and think, and then to act to maintain property with due regard for its value as a part of our heritage and/or history. Much cajoling of private citizens may be accomplished through tax incentives or grants of funds to aid in maintenance. Providing property owners with a reason to preserve may also help them financially. Whatever an owner's feelings about preservation, the financial incentive may prove to be a deciding factor. An owner who is sympathetic to preservation may need funds to allow the work to proceed, and an owner who is less sympathetic may be swayed by financial considerations.

There are other financial and economic factors which

do not involve direct payments of government funds, or the abatement of taxes. One is the "revolving fund," which is generally operated through private or semi-private groups. Simply, this fund is accumulated through donations and grants with the purpose of buying properties that are in imminent danger of destruction. The properties are then renovated to one degree or another and resold, preferably with some margin of profit. The money received from these sales is then reinvested in other properties in similar situations as the one just described, and the process is repeated. This has been a very successful measure where it has been properly administered, but the uncertainties of the real estate market can present a danger.

Financial forces that affect individuals are related to economic forces on a larger scale. While it is beyond the scope of this examination, the interrelated nature of micro-economics (which is equated with financial forces for illustrative purposes) and macro-economics (the larger world) should be borne in mind. For example, the actions of a group in a community to preserve some part of that community may reap benefits beyond what was originally intended. In a hypothetical situation, several store owner-operators all decide to rehabilitate their stores in a small town. They all compare their costs to that of demolition and new construction and find that they have

saved money. The money not spent on demolition and rebuilding may be spent at the businesses around town, including the other store owners' in the example.

Nice, newly redecorated shops in a pleasant context often attract shoppers - as was the intent - and they, in turn, attract more shoppers, ideally spurring further new investments. (See Dernburg: 140; also Black, Seaman, and Cavaglieri in Economic Benefits of Preserving Old Buildings.) This is a skeletal description of the economic process involved, but it serves to illustrate the general principles. There are dangers, of course, in that the projections may be wrong. This may lead to an accelerated decline on the one hand, or unmanageable growth on the other. (Goldberger, Ibid.) Of course, the projections for demolition and construction may also be wrong, with serious results for the individual owners/investors.

More reliable methods that may be applied to property owners involve the transfer of real properties and the limitations that may be connected with such a transaction. One type is the "easement." Under an easement, the property owner retains full use of the property, with certain restrictions attached. A familiar type of easement is that allowed for utilities, and this concept may be applied to other elements of a property. Marilyn Meder-Montgomery notes three types that are

typically accepted by preservation and conservation organizations: scenic/open-space/archaeological easements, façade/ structure easements, and interior easements. (Meder-Montgomery: 4) These easements are differentiated by the physical aspects of the properties they apply to, and are not necessarily related to legal distinctions as noted below. Since an easement is a negotiated agreement which usually results in a monetary benefit to the owner, there are incentives for compliance from its inception. A source of savings for the community may lie in the fact that the property owner may now be obliged to maintain the property and the community is saved the expense, which in extreme cases may involve the purchase of the property and the attendant tying-up of funds.

In her monograph, Meder-Montgomery states that easements are "Known alternatively as ... covenants, servitudes, or restrictions..." While some may differentiate between these, they are all created by contract or through a deed. Ring and Dasso, in Real Estate: Principles and Practices, list three types of easement: easement appurtenant, easement in gross, and easement by prescription. (P. 76) The easement appurtenant is of interest to preservation, since it is considered as a part of the land and thus "runs with it." Easement in gross may also be applicable, since it is the type used to gain rights-of-

way for utilities. Easement by prescription may be of limited use, since it carries with it a time restriction, usually 10 to 20 years.

Ring and Dasso also list four ways in which an easement may be terminated:

-consolidation of dominant and servient parcels (all properties subject to the easement);

-agreement to terminate among affected owners;

-completion of purpose so that the easement is no longer needed; and

-abandonment or lack of use. (P. 77)

The last restriction is of particular note, since it brings up enforcement. Usually, deed restrictions of all types are enforced through legal actions brought by neighborhood associations and similar groups. These actions are generally effective, but they rely on citizen participation, not on a branch of the government. Such measures may also be usefully applied to archaeological sites. Only illegal easements or other covenants are subject to direct invalidation by a governmental body.

Zoning provides a somewhat more coercive approach to preservation. Through passage of a zoning ordinance a local government may control growth and development in an area. The ability of local governments to do this is a

13), and there are many approaches that they may take to address specific issues. Zoning ordinances are publicly discussed, and are therefore subject to rescission. This makes them somewhat tenuous, but does not negate their worth.

One aspect of local authority involves the establishment of building codes. While these have been examined in a previous section, it will be well to note their position within the system being presently described. Stringency in code formulation must be balanced with flexibility to allow for changing circumstances within a neighborhood or community, since, for example, dividing large mansions into multi-unit apartments may be the only means of saving them and retaining the character of an area. Guidelines have been published in the Federal Register (Nov. 5, 1979 and May 27, 1980) which address administrative and legal guidelines, technical guidelines, and fire ratings for archaic materials. These documents were written by the Department of Housing and Urban Development, and subsequent additional documents have further elaborated the subject.

Historic district ordinances are another aspect of this type of police power. The National Historic Preservation Act of 1966 makes provisions that allow for assistance to properties eligible for listing in the

National Register of Historic Places, and local governments may provide property tax relief as well. This may lead to the creation of a designated historic zone or district which will give the municipality control over façades and protection to unique areas. (So: 340-42)

In Remember the Neighborhoods, two interesting points are made about historic districts and revitalization. First, "...in many changing neighborhoods, district designation tended to follow rather than cause the revitalization of an area." Changing social composition within a district brought about the historic designation and occasionally alleviated exploitation of the area by speculators. (P. 7)

Second, the changes in average income within a district tend to lead to the displacement of the people who have lived there. (Ibid.) This process is widely known as "gentrification," and it is generally condemned. There are several solutions to the problem of gentrification, and they are usually centered around rent subsidies or rehabilitation loans, tax abatements, etc. These techniques can also be applied to districts which are not historic and contain no buildings of noteworthy architectural merit. In such cases, maintenance of the character of a neighborhood is the goal, although the inclusion of notable structures is also generally provided

for, whether they actually lie within the district or not. (Ibid.: 8)

"The establishment of a historic district creates a legally binding review process that regulates demolition, alteration, and construction of buildings within the district." (Ibid.: 8) Local review boards or commissions review the process and issue "certificates of appropriateness" for approved construction. There is a potential here for undue political influence in the granting of variances and the like, but active community involvement will help reduce such subversions of the intent of the process.

While the bulk of responsibility for maintenance of zoning and historic districts lies with local bodies, the state and federal governments also have roles to play. Based on federal guidelines (See Survey, above), states are entrusted with the responsibility to implement procedures which coordinate activities within a specified framework. Procedures for Implementation of Certified Local Government Programs in Kansas and Kansas Preservation Plan (both from the Kansas State Historical Society) are examples of the actions taken by states to fulfill their obligations to the federal government. The first explains eligibility requirements, the processes of certifying, monitoring and decertifying local governments,

participation in the National Register process, funding transfers, and the selection of projects. The second is an attempt to give direction to state and local preservation projects. It gives a historic overview of the various types of structures typically encountered in Kansas, discusses programs of evaluation at the state level, and presents options, goals, and priorities. As a rural state, the Kansas plan focuses on rural issues affecting preservation, but a similar urban focus might be assumed for more industrialized states.

"Cultural resources" defines an area of interest which is relatively new to the scene. The American Indian Religious Freedom Act of 1978 (AIRFA) and the Archaeological Resources Protection Act of 1979 (ARPA) are applied by the National Park Service in conjunstion with Preservation Act of 1966, as amended (NHPA). The aim is to allow the continuation of cultural traditions among ethnic and cultural groups (notably Native Americans) by providing for their particular needs. Examples of the application of these Acts include the establishment of a permanaent "Brush Dance" Ceremonial Site for the Yurok Indians in Redwood National Park, and the arrangements made in Hawaii to allow traditional rituals within the Haleakala Crater that will not disturb archaeological remains. (Suagee: 2-3) These examples show that it is

possible to provide for cultural expressions while safeguarding other aspects of our collective heritage.

The effects of shrinking federal monetary resources for preservation and other programs shift the burden of paying for such projects increasingly onto the state and local bodies. The economic realities of the day transcend the political reasoning behind such a shift, since there is no foreseeable windfall to the federal treasury. The simple fact is that the states must set up budgets which will allow the necessary funds for preservation to accrue. Coordination between states and among interested parties will become increasingly important, and while such is beyond the scope of this examination, it is an issue worthy of immediate attention, particularly with regard to archaeological sites (whose economic values are almost certainly nil).

Technical measures apply to the physical fabric of the property. These may range from benign neglect to massive intervention and must be determined on a case-by-case basis. Specialists in the various fields should be called in to evaluate the specific needs of a property, whether they be engineers, ecologists, architects and others. The quality of a project will ultimately be determined by the quality of the people associated with it, and any successful professional will be willing to consult with the best people available.

The first technologies that need to be considered are those that were used in the construction on a property. The original builder's intent for a building had a direct effect on the decisions made concerning its construction. Slaves' quarters typically lacked the quality of construction deemed appropriate for the plantation's great house, and their preservation is more problematic as a consequence. Like slaves' quarters, many buildings were never intended to be permanent, with the result that the basic structural members may have deteriorated to a degree that requires their replacement. Such work will require a thorough knowledge of the materials and techniques used by the builders. Much of this knowledge must be inferred from the archaeological context, since the information is lost and must be rediscovered. Other aspects will need to employ modern technologies related to pressure-treated woods or moving entire buildings. As a matter of practicality, one never has as much information as one would like, but a comprehensive a body of knowledge may be built up beforehand to allow for informed decisions to be made.

It bears repeating that accepted practice, as expressed in the Secretary of the Interior's Standard's, is to repair rather than to replace whenever possible. This tenet is often accepted along with the correlary that actions taken should be reversible whenever possible. Any

number of examples may be cited of conservation work which accelerated deterioration rather than stopping it, and there is currently a controversy over the cleaning of Michelangelo's frescoes in the Sistine Chapel.

A structural system must first be assessed and then stabilized to preclude further deterioration, if such is present. This work should be done by a qualified engineer or architect. It may require a hydrologist to determine the ground flow of water, in the case of seepage, or a structural engineer to determine the causes and remedies of uneven settling. Whatever the problem, it is important to match the skills of the specialist to the problem at hand. If modern materials must be employed as a last resort, then due consideration must be given to the properties of the materials and their interactions with the existing fabric of the building. The insertion of iron bars to shore up a weak wall, for example, will do more harm than good if rising damp through the masonry corrodes the iron, which will expand and weaken the wall further.

Masonry construction has an air of permanence, but it is still subject to deterioration. The two main concerns are differential settling and rising damp. Differential settling may result from the ordinary movement of soil and be aggravated by changes in climate and moisture content

of the soil. It must be first ascertained whether or not any movement is now taking place, and any cracks should be examined to see if they are new or old. Cracks running with the mortar may signify a relatively weak wall, but cracks which run through stones or bricks regardless of the mortar joints indicate a serious problem with the foundation under an otherwise strong wall. Inappropriate mortar selection or mixtures may be evidenced by shattered units in the wall. Shrinkage of timber members and vibrations from traffic may add to the problem. Underpinning of foundations may stabilize the wall, but care must be taken that the work does not initiate new movement. (Timmons: 136-7)

Rising damp consists of the capillary movement of water up through the masonry. This may become trapped and freeze during winter, or it may weaken the mortar joints. The usual solution is to reroute ground water to prevent it from being sucked into the masonry, but this may alter the mechanics of the soil and cause other problems. The solution commonly used in the South was to have tall foundations of stone painted with whitewash, which allowed the water to evaporate and a stasis to be attained. (Williamson: 96)

An accepted solution today is the insertion of a "vapor barrier" at the bottom of the affected wall. This

consists of an impermeable material (usually sheet plastic) which is used to block the progress of moisture. A slot is cut through a horizontal mortar joint at the wall's base and the vapor barrier is then inserted through the wall in sections, which are then pointed in with an appropriate mortar. Once completed, the vapor barrier blocks the rise of moisture along the wall without changing the characteristics of the surrounding soil.

The selection of mortar for brick and stone should take into consideration the nature of the materials. Old bricks were not fired as hot as modern bricks, as a rule, and are not as hard (although the type of clay also helps to determine hardness), so repointing with Portland cement may damage the brick. This results from the unequal coefficients of expansion between the two materials, and the softer brick will be the material that gives way. The original builders made their own mortar from the materials at hand, and these were probably limestone rocks and dust. By analyzing the old mortar by inspection and floatation it is possible to determine the composition of the original mix and to duplicate it. This may not be advisable if the original mortar was itself defective, so a minor proportion of Portland cement is often added to give it strength, but not too much strength. An added bonus of this method is that the color of the mortar can

often be matched rather closely by adjusting the amount or type of crushed limestone and/or lime.

Studies of brick sizes and composition may indicate the probable dates in which an element was constructed. Further indications may revolve around the manufacturers of various brick types, as indicated by their imprints on the bricks. For example, bricks found in a bridge abuttment in Manhattan, Kansas were imprinted "Dickey No. 1," and were traced to a manufacturer in Missouri. These bricks were only manufactured in 1930 (Gurcke: 226-227) so an approximate date for the repair would be 1930 or shortly thereafter. Familiarity with the styles of different masons in an area's history may also help establish dates.

Anytime excavation or other foundation work is done, it would be well to have an archaeologist on the scene to take advantage of the situation. The archaeologist should be empowered to halt work, if need be, on the basis of the material turned up in the pit. This may cause inconvenient delays, but it is best to deal with such exigencies as they occur in order to avoid undue destruction.

Framing is an old art which has undergone many changes as it has developed in this country. The earliest examples continue the medieval traditions of Europe, and the development of the "balloon frame" in 1832 or 1833

began a tradition that brings us to the present day. Regardless of the type, there still exists the need to deduce the builder's procedure in order to understand what should be done. An exposed summer-beam of heartwood will not be satisfactorily replaced with laminated timbers, and the 2x4s of today will not match the members of a hundred years ago - in fact, they are not even 2x4" today!

Two problems are common to wood members regardless of their age or origin: insects and rot. Modern fumigants are commonly used in an effort to cope with insects, but the results are mixed and long-term information is also inadequate. Spreading boric acid is an old-fashioned method that seems to be useful, so long as care is taken to keep it away from animals. Another system from the old days is to trench around the foundation and fill the trench with vermiculite, which slits the chitin of insects and causes them to "bleed" to death before they can enter. Planting herbs and flowers of specific types has also been a traditional approach to prevention that has met with some success over the years.

Rot is an insidious problem that is best prevented, and difficult to treat. The culprit causing rot is water, usually in the form of a damp basement. (Timmons: 93-94) The moisture that collects there is drawn up through the walls and creates a perfect environment for fungus. The

solution, then, is to keep the basement dry by use of a dehumidifier or the installation of a complete heating system for the entire house. Once rot has set in, however, little can be done save the replacement of the affected members or to introduce new members in addition to the old (Timmons:94) and separation form the source of moisture. If the new member must be subjected to the same rotting environment, it should be properly treated before installation by an appropriate and tried method: historic structures should not be used for experimentation!

Exposed members and parts should be examined carefully for indications of past phases of the structure's morphology. The presence of nail holes, for example, may indicate the presence of an abandoned stairway location (Bullock: 60-61), and their shape may broadly indicate the date of its construction. Similarly, the presence of mortises, headers and so forth may indicate the locations of long-gone doors or other openings. (Ibid.: 58) Given the propensity to reuse architectural details, such as moldings and mantles, these clues may be quite useful in establishing the relative dates of various phases of construction.

Methods of assembly are also important, since they reflect the norms of an era which can be shown to change over time. Cecil Hewett has shed light on this topic in

his examination "Understanding Standing Buildings" in which he traces changes in the craft of carpentry at Rayne Hall, in England. Changes in craft techniques are slow to come about, but in certain cases they may prove to be informative for establishing dates.

Techniques such as those described above may be applied to other parts of a structure (and to structures other than houses). Roofing and siding materials are likely to be more transient than structural elements and may have been changed several times, or new layers simply added. Trim is an especially transient aspect of a building's character, and stylistic adaptations may be evidence to further elaborate a relative chronology.

Plaster is a valuable resource whenever it is found intact. Many techniques have been devised to retain original plasterwork on walls and ceilings, and particular attention has been paid to that which has decorative surfaces. Three-dimensional surfaces require the aid of a master craftsman, and are beyond the scope of this examination, but often the decoration is of paint and as such may be even less replacable. In either case, problems usually arise because the plaster keys which hold the surface to the wall have broken, and/or moisture has undermined the integrity of the plaster itself. In the latter case it is necessary to address the problem by first eli-

minating the source of the moisture, and then to stabilize the plaster with products such as Acryloyd B-67. (Leeke: 53) (It is assumed that patching is not an option for one reason or another.)

Once the plaster is stable, holes must be drilled very carefully to allow debris to be extracted from the space between the plaster and the surface beneath. Access may be had from above in many ceilings, but otherwise holes must be drilled through the plaster itself. A vacuum is used to extract the debris through the holes with the aid of a bent wire, then the surface is supported while specially formulated adhesives are injected to bond the plaster to the wall. (Leeke: 51-55)

Metals have been used in construction throughout the years, as nails and hardware and as structural and decorative elements. Many of the considerations attendant to the preservation of other elements apply also to metallic elements, but corrosion is metal's unique enemy. Quite a corpus of work has grown up around metals in architecture, both concerning their applications and their conservation. Some basic principles will be addressed here.

Metals are used both as structural and decorative elements in construction, but the emphasis here will be on the latter. Whether exposed or contained within a structure, the forces that act to degrade a metal are

essentially the same: fatigue and corrosion. Fatigue results from the presence of strain on a piece of metal which acts to compact its molecular structure and makes it brittle. This is seen in forging copper and silver (metals with which I have a familiarity due to my work as a jeweler) in which repeated hammering will eventually cause the metal to shatter unless it is annealed by heating. Bending stresses will have the same effect, as seen by repeatedly bending a can lid to break it off. An expert's advice should be sought to assess the extent of damage which may result from these types of forces. (Timmons: 217)

Corrosion characteristically results from the presence of water. Water is weakly acidic and acts as an electrolyte, carrying ions from one pole to another. These poles are formed across a charge gradient between two different metals or between a spot of corrosion and the underlying metal. Corrosions are metallic salts and carry characteristic electrical potentials which differ from their parent metals, and the presence of even a small amount of moisture provides a vehicle for ionic transfer and further degradation. This flies in the face of conventional wisdom, which states that a "patina" protects a metal object. (Townsend: 15) Actually, it indicates corrosion and the possibility of structural damage. It

certainly indicates the loss of surface metal. (Williamson: 97-98)

Points of contact will also present a gradient over which ions will pass. Natural electrolytic conversion of metals to salts can be seen in cases in which a bronze ornament has been attached with iron screws: the iron rusts fairly quickly and the bronze is relatively untouched. Certainly, iron rusts faster than bronze corrodes, but the same principles apply to any situation in which different metals may come into contact. (Timmons: 215, ff.)

Metals which have been corroded may often be reconstituted to a great extent through "consolidative (or 'electrolytic') reduction." This process artificially reverses the corrosive process by reversing the ionic flow. It is a very technical procedure requiring specialized training, but the results can be amazing. (Timmons: 255) Evidence of this may be seen in the conservation of many archaeological artifacts, particularly those recovered from the sea.

Our maritime heritage also deserves some consideration. The importance of harbors to cities such as New York and San Francisco needs little emphasis, and the preservation of these resources is of particular importance with the current problems of pollution and pressure

to develop waterfronts for commercial purposes. Wharves and piers are often neglected when people no longer use them, and the corrosive atmosphere of salt air speeds their deterioration. Additionally, sea creatures attack wooden structures, "sport" divers loot shipwrecks, and motor boats' wakes erode river and lake banks, further speeding the process of decay. Riverfronts are also subject to decay, although the natural forces are most likely to be related to flooding. In either case, protective measures need to be taken to ensure the integrity of the properties. In the case of shipwrecks, the best protective strategy is probably to keep them covered in silt and to otherwise leave them alone. Copper sheathing has traditionally been used to discourage the growth of sea-life on harbor structures, and attention should be paid to the effects of currents on foundations and existing structures.

Regular maintenance is the best protection for any property, regardless of its composition or its location. A plan of regular care, drawn up with regard for the special needs of the site, will often prevent problems from occurring in the first place. The selection of restorative materials should be made in adherence to the Secretary's guidelines and appropriate specialists called in to offer their recommendations. Specific remedies will

depend on the particular characteristics of a property, but this overview illustrates that bodies of knowledge exist which will provide the generalist with enough of a background to realize which questions to ask.

It is apparent that preservation strategies involve a great deal of specialized information which may not be immediately available. A number of sources of assistance exist, which include state and local historical societies, the National Trust for Historic Preservation, and the National Park Service. Private and professional sources also exist, and names and addresses are included in Appendix I.

ARCHAEOLOGY

Introduction

This section will explain current theory in archaeology by synoptically reviewing its development. This will involve an examination of archaeological methodology and its relationship with architecture and landscape, both as inextricably tied and as discrete elements. This section will also introduce the reader to some commonly encountered subdisciplines of archaeology. For example, "prehistoric archaeology" deals with cultures which predated written, surviving histories, such as stone-aged sites. This contrasts with "historic archaeology," which examines sites that may be described in contemporary, written accounts. These accounts may describe the site itself, or the culture which created it. The usefulness of archaeological theory and methodology for preservation will be pointed up in both general and specific cases. It is hoped that the reader will begin to understand the application of archaeological principles and see how they can illuminate the history of a property, well as the people who used it in the past.

The first obvious question is, "What is archaeology?" There are several definitions and glib phrases which pur-

port to be definitions: archaeology is anthropology and history; archaeology is the past-tense of anthropology; archaeology is not history. In its own way each of these phrases makes a valid point, but none are particularly instructive.

Joukowsky (1980, p.2) gives a formal definition: "Archaeology is the science by which the remains of ancient man can be methodically and systematically studied to obtain as complete a picture as possible of ancient culture and society and thereby to reconstruct past ways of life." These ways of life are known as "lifeways" in the jargon, and "ancient" could mean the past generation.

For present purposes it will also be useful to break the archaeologist's job down into two parts: the technical aspect and the scholarly aspect. The two are naturally intertwined in practice, since the technician must be able to interpret the evidence (s)he has unearthed. The discipline is more easily understood, however, by making the distinction, and the preservationist should be aware that such differentiation exists.

As a technician, the archaeologist must be able to define specific hypotheses for examination and then to test them in an experiment, which has traditionally meant excavation. This technician is of the type that Stanley South likes to refer to as a "dirt archaeologist." (1969,

p. 75) These are scholars who take their home to their work and actually exhume the aritfacts that others conserve, analyze and discuss. It still falls upon the dirt (or "field") archaeologists to write a field report and publish the results of their investigations.

It becomes apparent that even among technicians there is specialization, and that there is a perceivable dichotomy between field and lab archaeologists. Lab archaeologists may, in fact, be a part of a field team. The television specials that one sees on archaeology often depict scientists who don't seem to actually understand what is going on in the pits, but seem to know everything about the artifacts that come out of them. This is especially apparent when the presentation deals with underwater archaeology, which is a particularly dangerous area of investigation.

Akin to, but distinct from, the field archaeologist is the theoretical archaeologist. This person may be uncomfortable or inept in the field, but have an intuitive grasp of what the findings mean. Analysis is fundamental to archaeological goals. Ethnological considerations discussed earlier now show their worth. By studying their artifacts, one can learn about the ways of life of people in the past, which will then tell more about the artifacts. One hopes that this feed-back loop will also help

to answer some broader questions of the nature of cultural change and process. In this sense, this science is often a subjective study (Walker, 1967: 24) and research becomes an art form, but much the same can be said about physics. This is how intuitive flashes can occur, and how knowledge advances.

What is most important to remember here is that the archaeologist's role is multifaceted, requiring a generalist to relate the data on economics for the study period to maps derived from magnetometer surveys, etc., and specialists to derive the data in the first place. Walker quotes Taylor (1948: 43): "If an archaeologist *per se* is only a technician, then he is not an archaeologist: to maintain that because archaeology is a technique, an archaeologist is a technician is as much a solecism as to say allowance means permission." It is clear that both a technical hand and an open mind are necessary for effective archaeological research.

There are many things that an archaeologist "does," but on the whole Joukowsky's definition sums up the ultimate goals of archaeology in general terms and will act as a guide in this investigation.

Background

The development of archaeology in the United States is the result of an entirely different set of imperatives than existed in Europe. The seminal development of the discipline took place in the last century, and in Europe the focus was on ancient civilizations in the Classical vein. The raison d'etre of this work was the collection of art and artifacts, and archaeology is often still taught under the auspices of Departments of Art. As the century wore on, there also came to be an appreciation for the light that careful excavation might throw on written histories. It is for that reason that there has traditionally been much more known about the habits of Lords and Ladies than about serfs and villeins, although there has been considerable progress made on that score in the last twenty years.

Flinders Petrie is generally conceded to have been the first "modern" archaeologist. At a time when dynamite was an accepted archaeologist's tool, he developed systems for accurately fixing artifact positions on Cartesian grids, which made the dental-pick excavation we've all seen an absolute necessity. And even these simple refinements occurred only at the turn of the Twentieth Century.

On the American continents things were a little

different. Since there were no written histories in the New World, the people who were investigated were completely unknown. To this day we only know with certainty the names of a few of these peoples, and those are tribes which came into contact with Europeans during the historic period. Since the vast expanse of time before "history" was quite uncharted it became necessary to formulate a set of tangible tools with which to deduce the sorts of lives these people must have led. Analysis of careful documentation reveals much about extinct people, but only if one knows how to read the signs. Archaeology in the Americas took on the challenge of learning to read those signs. As the field of preservation expands to include non-white cultural relics, this capacity to read the signs will be increasingly important.

By the 1950s there was a resurgance of evolutionary theory in the United States archaeological community. This was simply a statement of the point of view which held that cultures, communities and societies change and evolve over time. Although not the sole progenitor, this school of thought contributed to the beginning of the explanatory period in the 1960s. The archaeologists of this period had been trained with a background in social anthropology and ethnology, and their concern was with processes. This movement has come to be known as the "New Archaeology." (Willey and Sabloff: 183ff.)

Willey and Sabloff contend (183) that there are also three attitudes held by these archaeologists which set them apart from the previous generation. First is their concern with processes. Second, a desire to describe laws of cultural dynamics, or changes over time, is held to be at least possible, if not immediately at hand. Third came the belief that the discovery of these laws would benefit anthropology and the world at large. This, although greatly oversimplified, is the essence of the "New Archaeology." It is important to realize that the emphasis has shifted from artifacts to the artisans and their world.

Preservation tends to emphasize static forms, commonly dating to a particular time frame. The archaeologists' emphasis on dynamic processes is in conflict with that tendency, and expositionary common ground needs to be broadly defined. The exposition of a property may reflect a specific time period or the property's development, but to try to do both will likely ensure that neither is expressed well.

It should also be recognized that much of the current research is "conservation" or "rescue" archaeology. This work is often done amid construction work that is destroying the site. In these cases the aim is to recover as much material and information as possible before the destruction is complete. These are extremely adverse

conditions, but the pace of site destruction as a result of development is such that the work itself is vital.

Methodology

The methodology of archaeology is, in general terms, that of a detective. The major difference is with regard to the time period involved, and the fact that all of the human "suspects" are long gone. Many of the questions most asked are also different, although many will be the same. The particular questions an archaeologist will ask tend to be of the style, "How did these people feed themselves through the year?" and "What other groups were they in contact with?" and "How did they interact?" Suddenly such disparate subjects as economics and particle physics come together, the former to explain trade in marine shells found in Kansas, say, and the latter to date the shells by measuring the Carbon-14 content of associated wood, charcoal, etc. These are the clues that answer the bigger questions, although the preservationist may be more interested in the smaller ones to reconstruct the details of a property.

An archaeologist's work begins with the discovery of a site for study. This may occur as a result of contact with an informant who has knowledge of a possible site, or

as a result of a survey. An archaeologist's survey is much like that performed in historic preservation, based on easily visible evidence, but also includes evidence concealed from view.

If archaeologists are concerned with a particular Indian tribe, for example, they will review the available literature pertinent to that group. By analyzing those data they may be struck by recurring aspects of their settlement patterns, such as association with terraces along secondary watercourses. A search of these areas can then be conducted to determine if that "trait" is diagnostic, in other words that it will predict where a site (or "cultural deposit") is likely to be found which relates to a specific group (or "population"). The accuracy of such a diagnostic trait may be statistically analyzed and permutations discovered which may also be found to be predictive, and thus is born a new line of research using computers rather than trowels.

Once a site has been tentatively identified by the researcher, it is necessary to actually visit the site and physically examine the features. These may take the form of scattered bits of burnt earth and pottery, but they may range up to standing structures of considerable bulk. These latter may be relatively new and may indicate wholesale disturbance on the site. They may also require

the services of someone trained in historical archaeology, since this researcher originally was looking for prehistoric Indians. These two aspects of archaeology are not interchangeable, and have similar but quite distinct goals and methods of excavation. In recruiting an archaeologist for a preservation project it is wise to make this fundamental distinction and find an archaeologist with compatible research aims.

Surveys are meant to describe the terrain and any modifications that have been made to it, especially by humans. Naturally, not every bit of information can be included, so some selections must be made. This is the reasoning behind standardized survey forms and procedures for field surveys, although the impression should not be created that any surveys are standard. The use of standardized methods ensures comparable data. This aids in the in the development of theories and techniques to make the survey process more efficient. Also, a part of this process may involve computer analysis as well, and computer programs require information in specific formats. Further refinements could allow this information to be of equal use to preservationists through the use of complimentary forms, allowing either field to process the same data, each in its own way.

Once the site is discovered an analysis must be made

as to its desirability for further investigation. This may not simply be a matter of findingmthe most artifacts, and usually there are vary complex motives behind the decision. There are basic questions which archaeologists ask, and these influence a decision whether or not to dig. In actuality, of course, one digs where one can afford to dig, which usually means "where someone else will pay for it." It is for this reason that a growing amount of work is being done by archaeologists working under contract for private and government agencies. Hence the term "contract archaeology."

Ethnology and Archaeology

Broadly, anthropology is the study of mankind in every aspect. Ethnology is the study of cultural aspects in contemporary cultures which may or may not be tangibly expressed. The distribution, relationship and activities of "ethnic groups" is the realm of ethnology.(Davies: 79; Barnouw: 20) In the present context, the term "culture" refers to the net result of the social and conceptual adaptations that people make in response to their environment. This environment includes the physical dimension and the dimension of personal interactions between indi-

viduals, who make up the population as a whole. All of these factors influence the designs adopted by different peoples for their built environment, and the interaction of these factors changes over time. Preservation projects need to take these changes, and their influencing factors, into consideration as a part of the "evaluation" phase.

To illustrate this principle, one may compare the typical urban family dwelling of an Eastern country with one in the United States. The former societies value the privacy and intimacy of the home in the context of very dense populations. Values held by the people define proper and accepted behavior. They may also dictate that the women of the family should be hidden from the public eye to some extent. The result of these (and other) factors is the typical courtyard-centered designs of Eastern housing, in which the rooms of the dwelling are arranged around a central courtyard. (DuBois:324-5) This courtyard becomes the center of family activity and results in an "inward-looking" design. The climate and the availability of materials also have an impact on the design and construction of these dwellings, and to some extent they dictate possible forms. This combination of social and environmental factors produces an immediately recognizable design which effeciently serves a set of prescribed functions using the existing "cultural vocabu-

lary." Like an architectural (or other) vocabulary, this term refers to the range of conceptual possibilities available to the people of the society. These are familiar features which often communicate something specific to the community, such as a church or a government building. Architecture can be a form of communication which requires no words: it is, in part, the tangible result of a collective memory.

By contrast, a typical U.S. dwelling is characterized by a society which favors the independence of individuals, but also their participation in all aspects of community life. It also reflects attitudes about women which are radically different from those in China or Arabia. While wage-earning women are seen as a relatively new phenomenon in this country, their open participation in its daily affairs predates the Revolution. This all results in a population that largely likes to keep up with what is going on around town, but also treasures its homes. The result is an "outward-looking" design in which the front porch (or "stoop") becomes a summertime focus, and the kitchen or living room serves such a role in the winter. The generally cooler climate in the industrialized U.S. also imparts certain restrictions (Rappaport's "criticality", 1969: 58-60) to building designs, since buildings generally need to retain heat rather than disperse it.

Such a set of social and envrionmental factors also dictates the accepted forms that dwellings may take and makes them recognizable to Americans. This denotes our cultural vocabulary in precisely the same way as building forms reflect lifeways in the East, although with a different lexicon. (Glassie: 8)

The preceding example is an over-simplification, but serves to illustrate a principle: specific social and environmental inputs will affect a culture's traditional built environment, and that by becoming familiar with the social processes involved it is possible to recognize those processes at work through the archaeological record.

A cultural gap may extend temporally as well as spatially. The values and ways of life that our grandparents held may vary as radically from our own as from those of people of Eastern cultures. An expression of this temporality can be seen in the demise of the parlor/dayroom "diptych."

The origin of this duality of rooms, particularly in better homes, is culturally based in its entirety, and from a functional view it is an overt waste. The parlor was to have been used mainly for two purposes: as a place for the newly-deceased to lie in state (Coffin: 71, 81ff), hence "funeral parlors", and as a place to receive people, such as the minister of the local church. These

functions will have been dispensed with some time ago in most U.S. households, but the extra front door on many old homes is testimony to a vanished cultural norm. This is much of what the preservation of a property hopes to accomplish.

A culture and its architecture are, then, interactive. As Andelson notes with regard to the Amana Colonies:

> "Since 1855, Amanans have shaped their built environment jointly, and it has shaped them: their behavior, their attitudes and their dealings with the world outside the villages. The built environment...was a backdrop against which Amanans measured the meaning of their behavior and the character of their community." (1986: 58)

It is apparent that there is a symbiosis at work between people and their environment, mediated through culture, but the question remains as to how it may be measured and evaluated, if at all. (Cf: Movle; McQuillan.)

An ethnologist gathers data by living with the people under study, often for extended periods of time. By learning the language and customs of the subject population first-hand, the researcher gains insights into the mechanisms which motivate individuals, and thus drive

their society. This technique will also allow one to gain an appreciation for the adaptive designs of constructions and the demands of socio-environmental factors.

"Ethnoarchaeology" is a field which is becoming current. It is used to refer to research which combines ethnographic observations with archaeological excavations. "Ethnoarchaeologists attempt to define relationships between behavior and material culture..."(Kramer: 1) J.G. Nandris sees their aims as "clarifying the material outcome of behavior, and of enlarging the range of archaeological interpretations", with emphasis on the latter. (Nandris: 267) It is also known as "living" or "experimental" archaeology, and in the latter guise it involves researchers living out the assumed lifeways of extinct peoples.

"Ethnohistorical" research, in contrast, has as its goals the elucidation of the causes of cultural change and nature of that change.(Kruckman: 343) This involves the use of ethnological and historical methods of research, as well as archaeological fieldwork to test the theories which evolve. (Gorecki: 187) It becomes apparent that ethnoarchaeology and ethnohistory are opposite sides of the same coin, and that their relationship should be symbiotic.

For example, Susan Kent's research among the Navajo

has resulted in a system for judging the rate of acceptance of cultural change between different groups. First, a "traditional" culture was defined for the population as a whole. This baseline is an impression of the culture as it existed in protohistoric or early historic times.(Kent: 62) (This is seen as being somehow "pure", although it is unavoidably an arbitrary time period to annoint as being "traditional.") By the use of ethnographic materials and observations, coupled with goal-oriented excavations she was able to devise a system by which the relative acceptance of new cultural imperatives may be assessed. She also demonstrates that a given population will exhibit a "range or continuum" of acceptance of cultural change at a particular time. (Kent: 63)

The applicability of this approach to ancient (i.e.: mesolithic) sites has been worked out by M. Murty in South India. Murty appraised the archaeology of the region, factored in current adaptive strategies, and developed a model of changing land use patterns that accompanied the shift from mesolithic to neolithic (hunter-gatherer to village-dwelling) society. (Murty: 192ff.)

The relationship between culture and architecture is illustrated in an ancient context by Dan Healan's work at a Mayan site in Mexico. This is an ethnic group whose structure is largely unknown. The ceremonial centers are

well documented, but the dwelling of the average citizen has been generally ignored. Healan identifies the existence of house groups, then identifies each group as a kin unit (or "extended family" of several sets of parents and their children). (Healan; 149) He also suggests that the identification of duplicate activity areas at certain other sites may indicate a kin group occupying a single, larger dwelling. (Healan: 150)

"Historical archaeology" or "historic sites archaeology" is that branch of the field concerned with the historical era, and most closely associated with historic preservation. It is an infant science (its journal was first published in 1967), but it professes to incorporate ethnology, archaeology and historical records. In this it represents the germ of a "unified field theory" of sorts, combining ethnological researches with archaeological ones.

Stanley South (1988) emphasizes the linkage between "patterns and the past cultural processes responsible for them." (South, 1988: 24) Further, he encourages the application of this principle to the study of nations as cultural systems, and of cultural systems on a global scale. (Ibid.) In South's opinion (Ibid.: 27), the major concern of historical archaeology should be "World cultural systems and their operation, as they exploit the available energy resources through class distinctions..."

Stephen Mrozowski takes a rather less strident tone, but generally concurs that "While seeking the origins of urban society is important, it is equally important that archaeologists investigate the acceleration of 'World Urbanism' which began during the 18th century." (Mrozowski: 19) He also notes the inter-related nature of perspectives; a body of particularist theory is important, but cross-cultural research is vital for historical archaeology to survive as a viable field of research. (Ibid.: 18) His application of this idea leads to the conclusion that "historical situations may share structural similarities," and that insights thus gained "can also be applied to contemporary questions concerning the role of urbanization in industrializing nations..." (Ibid.: 22) If historic preservation is to maintain the past accurately, these ideas must be incorporated into research in the field.

While the foregoing may seem to be broad plans for such a young field, there is no doubt that archaeology can fill gaps in the historical record. There has always been little incentive for people to write down the most mundane aspects of their daily routines, although to an anthropologist these details define who these people were. The result is an opportunity to evolve a field in which broad questions can be answered about society, and it also

provides the architectural historian with an alternate perspective and a new resource base.

Archaeological Surveys

The beginning of any investigation is the survey. This takes several forms and has several aspects. South lists seven types of survey data: surface survey; topographic survey; resistivity, magnetometer and metal detector surveys; aerial survey; and historical research. (1977a: 279-281) These are not considered to be mutually exclusive, and in fact they all make basic contributions to any systematic survey.

King (1978: 31ff) notes two types of survey which define the two poles of survey methodology. The first of these is the "uncontrolled-exclusive" survey, which excludes certain areas based on unverified (uncontrolled) assumptions. These may be based on truisms about where people live, or may be no more than whimsey. At any rate, the information gleaned from such an approach is only useful to the extent that anything is found. It gives no basis for estimating population distributions or anything else beyond a very narrow perception.

The opposite approach is the "controlled-exclusive" survey, which is also the most efficient. (King, 1978: 33)

This system relies on a thorough knowledge of the area to be surveyed, and well-founded and defensible assumptions about where sites might be. This last assumption may be best supported through a regional predictive survey. This large-scale survey seeks to categorize sites by type and to incorporate an evaluation system to ensure that the survey is indeed representative, and predictive, of all types of possible sites in the area. (Cf: p.34ff, above)

From the point of view of the planner and the archaeologist, the most desirable sort of survey is described as the "non-exclusive comprehensive deployed survey with the background research and subsurface testing." Taken singly, the terms become comprehensible:

"Non-exclusive": no part of the area is excepted out-of-hand; coverage is complete.

"Comprehensive": all types of archaeological sites are included in the survey.

"Deployed": the survey team is deployed over the area according to a plan to assure complete coverage. ("Gang" survey refers to little more than a group of people wandering across the terrain like so many cattle, and with little more to show for their effort.)

"Survey": the actual walking (of flying, etc.) across the survey area.

"Background research": a review of the environmental

data, historical references, and any other material that may help to indicate where special attention may be needed.

"Subsurface testing": includes digging according to one or another system, often a shovel of dirt is turned over every few paces.

By mixing these qualifiers, one can design a particular survey for a particular set of circumstances. There are parallels with this method and methods used for historic preservation, and its nature could provide a basis for mutually beneficial research between the fields. By eliminating duplication of effort between the disciplines, savings in time and money could be realized, while the quality and quantity of information gathered could be increased.

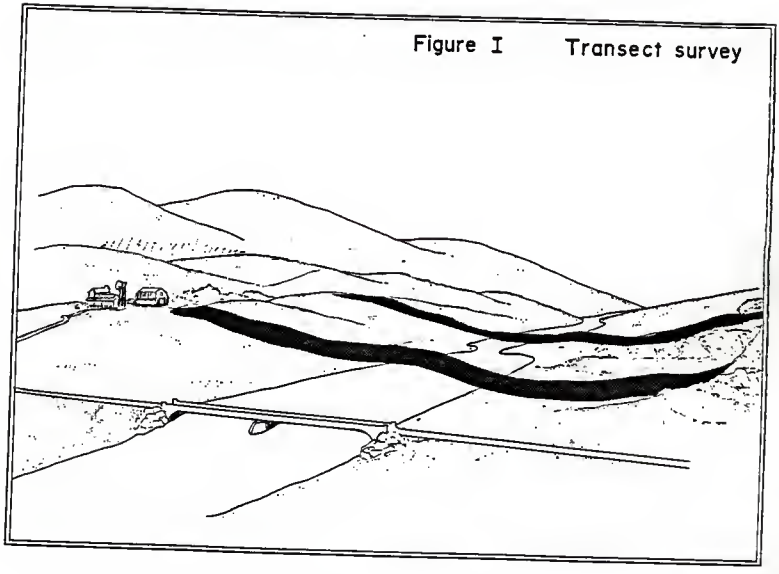
It is important to avoid too narrow a focus while realizing that only so much data can actually be gathered. It is inevitable that some selection, conscious or not, will creep into any system. This is bias, and it is the curse of any statistical evaluation. While it is fruitless to expect to completely eliminate such bias, it is useful to realize that it exists. It is a commonly accepted assumption in anthropological research that allowance can be made for known biases in the evaluative process, but they must first be identified. Talmage and

Chesler advocate "non-site sampling" as a part of their surveying technique (1977:6-7) in which emphasis is placed on artifacts and artifact clusters rather than more overt and obviously significant sites. Dancey is quoted (Ibid.) as referring to such an approach as a "re-oriented" survey and notes five rules of methodology:

1) inspect the surface for artifacts, not sites;
2) systematically sample the environmental diversity of the survey area;
3) work within defined units;
4) cover the ground in a patterned course;
5) record exact location.

Such an approach might be especially useful to preservationists on a particular property.

The "transect" survey is a generic survey which is commonly encountered. In such a survey the team members are dispersed about 50 ft./ 15 m. apart and walk in a sweep across a landscape, so that they make two passes. (Fig. 1) The pattern adopted for the sweep will vary according to the topography. In the illustration, a fairly straight-forward situation is presented, but a deep lake rather than a river would have altered the sweep pattern. Similarly, the survey of an elongated feature (such as a pioneer trail or a river course) will tend to sweep exclusively along the trace, rather than perpendicu-



Source: King, Thomas. The Archaeological Survey: Its Methods and Uses, P. 51.

lar to it. It is clear that this system will miss a great deal, but it provides a statistical sampling and a starting point for further work in an area and has demonstrated its usefulness.

Intensive surveys are fairly common today since they are often required of federal agencies whenever they undertake construction. (These are occasions when archaeologists and preservationists find themselves thrown together, and occasions that are ideal for sharing methods and information.) There are statistical problems which arise as a result of varied approaches to these surveys, and Alston Thomas notes several of them. "Survey error" is defined by him as the difference between a "target universe" (actual observable remains) and a "known universe" (actual observed remains). "Economics and controllable survey factors - survey techniques and strategies (Schiffer, Sullivan and Klinger, 1978) - account for most of the observed differences." (Thomas: 100) While he makes no specific recommendations, Thomas does bring the matter into focus.

These methods af analysis may seem arcane, but they are essentially statistical systems which take into account general patterns of human behavior, adjusted for the data base, and assist in the discovery of less obvious patterns.

The discovery of buildings in the course of a survey presents an interesting array of problems. On the one hand, a building can be considered a complete and complex artifact, to be analyzed with regard to its component parts like any other feature. On the other hand, a well maintained, tidy example of Queen Anne Domestic is depressing to an archaeologist. The very point of an investigation (i.e.: artifacts) will have been tidied-up long ago. A much more desirable structure, from this standpoint, would be the delapidated shack up the road, ignored for decades. It is a curious fact that the only points of interest for the archaeologist in the first case will likely be the trash pile, cistern or well, and the privy.

A new attitude is emerging in the United States: the foundation of historical archaeology as a distinct entity within the archaeological community has helped to focus attention on our built environment. Investigations of the structures of other cultures, and the sites surrounding them, have yielded a body of knowledge which may now be applied to the study of lifeways in our grandparents' day. For this reason and others, all structures (or parts thereof) should be identified and recorded in a cultural survey, and the survey should ideally be of as much use to a preservation project as to an archaeological dig.

Excavation

Most people consider that the actual digging of a site defines the discipline of archaeology. The excavation process is more involved than simply digging, however, and it is also a part of a larger process. This section will provide an overview of that process.

The first part of any excavation is the site survey. This is essentially a small-scale version of the general survey, so it must also be more precise. A grid is established on a map of the site which divides it into 1 meter squares. Everything that shows on the surface is then mapped on this grid, and for a historic site a metal detector will also prove valuable. A coding system is employed to distinguish types of artifactual remains for quick comprehension and data entry at a later date.

On the basis of the site survey, the locating of specific spots for pits and/or trenches can begin. Decisions about the methods are based on the research problems that the excavation is trying to answer. A concentration of broken china on the surface may indicate the kitchen area of a house, hotel, etc. A research design which focuses on domestic aspects of trade or food production will give this area precedence over a likely smithy area identified with the metal detector. It should

be noted that the china must be located on the surface in order to be discovered, but the metal detector will pick up the metallic salts in the soil whether there is any surface indication or not.

There are other indications of subsurface remains which are important. On a large scale, these often take the form of shallow depressions or mounds. A trash pit may reveal a great deal about the economics of a community or about the lifestyle of a particular family, including examples of household furnishings. A long, straight, shallow trench that only measures a few inches in width may mark the position of an eave, and by extension, the foundation and the width of the eave itself.

The site itself is considered to be a single, highly complex artifact. This implies a hierarchy of artifacts which must then range down to very simple objects, and such is the case. One objective of the field archaeologist is to discover and record each of these simple artifacts in such a way that they can illuminate the larger artifact as thoroughly and as evenly as possible. This calls for careful preparation, and the implications for historic preservation should be obvious. Accuracy of reconstruction is enhanced by such illumination, both of the material and the social aspects of the property.

Joukowsky lists six inter-related steps which should precede an excavation:

1. Ensure that an accurate site grid has been laid out,
2. Draft plans of legal boundaries, archaeological and natural features.
3. Establish site control points for verifying elevations.
4. Draw a topographic survey which details the physical features of the site before they are modified.
5. Locate any sewer or utility lines in the area.
6. Draw a master site plan. This takes the form of a large map which shows topography, datum points, gridwork, etc.

It is important to have a system by which the grid squares may be identified. The south-east corner of any square is used to designate that square, by convention. A gridwork "datum" point is established, therefore, beyond the likely south-east corner of the site and the stakes which are driven to define the grid are numbered serially to the north and west. The important thing to remember is to be generous and include ample room to expand the excavation if it happens to head off in an unexpected direction. As a result, the datum is usually entirely out of the grid area. It is established on a topographical map

and located at the site with a transit, commonly by triangulating between immovable objects.

The grid is made up of a number of individual squares which are partitioned by "balks" or "berms" left along the grid-lines during excavation.

The purpose of the balks is to ensure stratigraphic integrity. By this is meant the relative positions of deposits. It is a tenet of archaeology that a particular occupation will leave its traces upon the traces left by the previous inhabitants. As a result, the oldest deposits will generally lie beneath the newer ones, decreasing in age as one nears the surface. Therefore, reading the archaeological record during excavation is roughly analogous to skimming a historical atlas from back to front, without knowing how it will begin. This is an ideal situation, however, and frequently the stratigraphic record is confused by burrowing animals, later digging by humans or by natural phenomena, such as erosion. In these cases it is incumbent on the excavator to exercise considerable skill and care in interpretation.

Once they are identified, dating of the strata is largely dependent on the artifacts contained within them. The occupation levels they describe are very thin in historical sites, so great care must be given to assigning an artifact to a particular level. If the level contains a

coin dated 1850, then this is the "terminus post quem," the date after which the layer was deposited. It is obvious that the coin could not have been deposited prior to 1850, but there is no indication as to how much time passed before it was deposited. "Terminus ante quem," then, is the date before which the deposit must have been made. (Hume:69) If the structure was known to have been burned in 1859 and never rebuilt, then a fairly secure assumption can be made that the layer dates from between 1850 and 1859. By correlating this information with other levels a logical reconstruction of chronology can be worked out for the site. This chronology will be absolute to the extent that exact dates can be worked out, but a relative chronology can be worked out for the site based on stratigraphy alone. This sort of information is particularly useful in establishing dates and sequences for building additions and other construction which may have altered the appearance of a preserved property.

The artifacts themselves usually hold the greatest public interest, and this interest is shared by the archaeologist, but only to the degree to which their "provenance" is known. Simply stated, this is the precise three-dimensional position of the artifact within the soil matrix. The 1850 coin will tell nothing if the level in which it was found is unknown. The location of the object

is measured in from the sides of the square, and its depth is determined from the datum, in centimeters.

In order to identify each artifact and its provenance, a bag is allotted to each artifact and a number assigned to it. The bag has the number of the square and the level of the artifact written on it with indelible marker, and all pertinent information is entered into a master catalog. A number is assigned to the artifact which is later marked on the artifact itself. Similarly, larger features, or assemblages, of artifacts may be given "feature numbers." Features may not include artifacts, but are still artifacts themselves. For example, the path to the privy will not likely be cluttered with objects, but it is definable in itself and indicates the arrangement of the site. A feature may be only a stain in the earth, marking the site of a post, well, or some other departed artifact. Features and artifacts are photographed as they lie after being unearthed, and are drawn on the master site plan.

The techniques used for excavation are dictated by the site. It is obvious that the balks which define stratigraphy will not stand in sand or under water. The more usual soils that one encounters will be best addressed by carefully peeling back the soil to discover the top layer, and then proceeding to peel back each subsequent

layer. Hume is an advocate of tediously scratching the ground with a trowel or a dental pick, so as not to miss a thing in the first instance. (Hume:104) This is well if one has the time. Most archaeological excavations are short on time, however, and often compromises have to be made. Commonly, then, resort is made to "shovel scraping." By carefully scraping the surface of appropriate areas with a shovel, it is possible to move a great deal of dirt in rather short order while still maintaining the provenance of the artifacts.

The dirt so removed is then screened through a ¼" mesh to recover anything that the excavator may have missed. Hume again recoils at this thought (Ibid.), but economics often warrant such a technique. It is true that the exact provenance of the artifacts is lost, but their general location will be known to within one meter.

Artifacts are commonly divided into statistical groups according to their deposition. In other words, an artifact which is lost through a hole in ones pocket is termed a "primary" deposit. Artifacts which are deposited as a result of sweeping a floor are termed "secondary" deposits. Finally, those deposited at some distance (such as in a "midden", or trash dump) are "tertiary" deposits. The terms refer to the amount of disturbance that the object suffered before being left alone, and the relation-

ship of these deposits to one another will help to reconstruct that arrangement of the site when it was occupied in earlier times.

An artifact that is often overlooked by the lay-man is pollen. This is itself a subdiscipline of archaeological study. By analyzing the pollen (and seeds) taken from a site, the researcher can discern much about the diets of the inhabitants or about their landscape design. Each plant has a distinct pollen, which is nearly indestructible and which can be used to identify its particular species. Entire gardens may be reconstructed in this way. The samples are collected as volumes of dirt, labeled as to their provenance and sent to a specialist, who may not be an archaeologist, for analysis.

The excavation of foundations provides another avenue for gleaning information about particular structures. If the foundation is of stone or brick and has no cellar, then the builders must have used a trench to lay the foundation. By analysis of the refuse in the builders' trench it is possible to tell when it was filled in, and hence when the foundation was laid. If several foundations are in evidence that clearly date from different times, their relative chronology may be established. Similarly, cellars may be dug to gather comparable information. The nature of the foundation may also give infor-

mation as to the height of the structure since a higher wall will bear down with more weight, and therefore need more support and a heavier foundation. The evidence may also provide clues as to the nature of the walls (which may be of stone, brick or wood), and this will figure into the calculations and any plans for preservation. Naturally, any retrenching for maintenance will disrupt the stratigraphic record.

Once artifacts are discovered and recorded they must be conserved. In the field this process is one of basic preservation: the object is kept intact until it can be properly conserved in a lab. While the stone tools of aboriginal cultures may need little or no conservation, the objects are often much more delicate. Iron rusts, and while the electrolytic reduction that can reconstitute it may be attainable in the lab, it is generally not available in the field. Hypothetically speaking, the piece may be reconstituted "in situ" by such means, but until such technology is developed, the excavator is faced with its removal and transportation intact. This may be accomplished by any number of means, depending on the situation, but often it requires the removal and shipment of the object complete with the soil matrix.

The excavation proceeds until the planned excavation is completely dug. At this point the stratigraphy is

recorded for each of the balks, and they are torn down. This exposes the entire floor of the excavation at one time, and allows an overall view for the final mapping of artifacts and features. More photos are taken and the master plan map checked prior to refilling the pits. The site is left as much as it was before excavation both out of respect for the site and for future investigators. This is another area of overlap between archaeology and historic preservation, since the preservation of archaeological sites falls under the parvenu of the various preservation acts of Congress. Also, the body of information now assembled can finally be analyzed for the evaluation of a particular property.

In this quick overview of the excavation process, many of the finer points have been or completely ignored. It does serve to outline the basic process, however, and will communicate a part of the archaeologist's perspective. Since the proper conduct of an excavation is of enormous importance to archaeologists' professional standing they are understandably sensitive about their sites, which are the source of their data. As with any analytical process, the reliability of the data determines the accuracy of the findings, and an abused site provides misinformation in abundance. Once a site has been dug it cannot be dug again.

Evaluation

Once back in the lab, the real business of archaeology can commence. This is the study of the artifacts which have been uncovered, and the publishing of the findings: a site which is dug but never published would better have been left alone. A familiarity with these site and excavation reports hold a wealth of information of potential interest to preservationists with some background in the subject.

The techniques for evaluating a site are what the "new archaeology" is all about. The seminal work of David L. Clarke, Analytical Archaeology (1968), provided a theoretical basis for the "science" of archaeology. Prior to this work, much of the analysis had been rather ad hoc and archaeologists found themselves in the unenviable position of defending their discipline as a real science. Clarke's approach is honed by Schiffer (Behavioral Archaeology, 1976) and by others, and a statistical framework has developed for analysis of artifact scattering. New computer programs provide a means of further analyzing the distribution of artifacts and discerning patterns. The interpretation of these patterns, however, is inevitably subjective though it may be well founded.

"Scatter patterns" of artifacts across a particular

stratum lend themselves to statistical analysis. These are, simply, the patterns made by artifacts scattered across a level.(See South, 1977b)

In actuality, the study of patterns with regard to excavated artifacts deals with much more complex patterns than scatters. Clarke integrates "phase pattern regularities" with "time pattern regularities" in his theoretical discussion. To define phase pattern regularities, Clarke makes the three following observations:

1) The specific culture can be represented as a static model in terms of a nucleated constellation of specific artifact-types defining its polythetic set and arranged in terms of their mutual correlation in multidimensional space.
2) The subcultural artifact-type complexes should be represented as secondary nuclei or clusters of highly inter-correlated artefact types within the overall constellation of the cultural assemblage. However, such nuclei or type clusters can equally arise in other ways than in connection with subculture complexes.
3) The presence of several distinct cultural assemblage populations within a sample population of assemblages should be reflected by multiple and separate nuclei within the overall galaxy of artifact types. (Clarke: 283)

Clarke continues, "Time pattern regularities of cultural assemblages can be examined under three aspects, each of which has an appropriate dynamic model:

1) The quantitative change and oscillation in numbers of artifact types (as variations in numbers of different artifact types)...;
2) the quantitative change and oscillation in numbers of the population of component assemblages defining the total cultural assemblage in successive phases...
3) the qualitative change and oscillation of the cultural assemblage system as a structured system. (The system's time trajectory takes the culture through a succession of states or phases marked by low thresholds until finally a major threshold defines a quite 'new' system altogether." (Ibid.: 283-284)

This is, of course, a great over-simplification, but it serves to illustrate the concept that these elements interact to describe processes of cultural change, as characterized by the archaeological record. This characterization could be applied to preservation, and might prove to be of predictive value. Through analysis of patterns of land use over time, and for various cultures, assumptions may be made in restorations when tangible

evidence is lacking. These assumptions may be no better than educated guesses, but they are an improvement over blind guesses.

In producing a synthetic model to describe the behaviors which led to the interactive processes described by Clarke, Schiffer analyzes data and the processes of artifact deposition. He suggests that archaeological data have three basic properties:

1) They consist of materials in static spatial relationships.
2) They have been output in one way or another from a cultural system
3) They have been subjected to the operation of non-cultural processes. (Schiffer: 12)

Schiffer also describes several "transformation models" which describe the processes of artifact deposition. The "behavioral chain" is representative and illustrative. A behavioral chain is a sequence of activities, each of which can be defined by seven components:

1) a specific behavioral description of the activity;
2) the nature of the constituent human and non-human energy sources;
3) element(s) conjoined or associated with the one under consideration;

4) time(s) and frequency of activity performance;

5) the locus of activity performance;

6) points at which other elements integrate with, or diverge from, the element under consideration;

7) the pathways created to the archaeological record by the outputs of activity performance. (Schiffer: 49)

If a building or group of buildings can be seen as an artifact, made up of smaller artifacts, then repeated patterns can be visualized and categorized according to schemes derived from such workers as Christopher Alexander (A Pattern Language).

The utility of this approach is seen in Carol Kramer's work in Iran. By excavating the floors of various village houses, she was able to draw conclusions regarding the uses of various rooms, the changes that they underwent due to changing family fortunes or situations, and the course of remodeling or expansion of the dwellings. (Kramer: 86ff.) Jones, et al, provide similar analyses of their work in Macedonia although the aims of their research were quite different. By analyzing the types of artifacts in a room and comparing it with other rooms in the building, or similar rooms in other buildings, a heuristic framework may be developed for a site or group of related sites. This principle could be applied to recrea-

ting patterns of room usage for a house museum, or yard usage for a farmstead musuem. With information gleaned from excavation and pattern analysis, an accurate depiction of the way a property was used can be made.

A knowledge of the ethnic background of the vanished inhabitants may also be useful. South (1977b: 47ff.) has described how he has fixed the position of vanished doorways from such knowledge. The colonists on the eastern coast of the present United States were, by and large, transplanted Englishmen and behaved much as they always had back in Britain. One trait that they transplanted to the Colonies was that of sweeping the refuse from the floor right out the nearest door. This is a behavior pattern that dated from Medieval times and was well ingrained. Thus, by identifying twin deposits of sweepings, about two feet apart and with a clean space between, he knew that a door had once stood in that space. Similar patterns may be applied to the sites of other cultures with similar results. More broadly, the patterns of settlement will also follow patterns, as shown by examination of any territorial map of an immigrant area, such as Kansas. Here, it becomes apparent that English-speaking communities tended to be located at river and road crossings, while other immigrants tended to locate somewhat up or down stream or down the road. This is an area of investigation in which the historical geographer is invaluable.

A knowledge of changing technologies will figure into the interpretive framework as well. "Industrial archaeology" in the British vein is hardly archaeology at all. It generally involves no excavation and more properly belongs in the realm of preservation. This is not to say that industrial archaeology does not exist. Hume devotes a good deal of space to the intricacies of such work, and Teague and Shenk give ample vindication of this line of research. By analyzing the sites of manufacture it is possible to chart the development of technologies as they occurred. It is also possible to make valid statements as to the state of a technology in a particular area. The development of American industry is often compared to that of Europe and the origin of various wares provide clues as to the economics of the period under study. These become studies of trade connections, relative availability and so forth, and are the basis for reconstructing a very important aspect of the lifeways in the various communities. The development of the Shaker Barn is an example of the lifeview of a community reflected in the architecture that it designed to meet specific needs derived from that perspective.(cf.: Andelson, 1986; Mrozowski, 1988)

These techniques of evaluation may seem rather obtuse to those unfamiliar with them, but they are founded in logical relationships among the various clues that present

themselves to the investigator. It should be apparent that this correlation of variables is slow and time consuming work, and that any single artifact has the potential to disrupt the logical fabric. It should also be apparent that the bulk of an archaeologist's work takes place after the excavation is completed and the laborers have gone home. This inevitable time delay is at the heart of much of the conflict between archaeologists and preservationists: archaeologists don't like to be rushed, and preservationists don't like to be delayed.

The basic aim of archaeology is to define the processes of cultural change in its various aspects. Stanley South writes:

> "Archaeology on sites has long dealt with cultural resources as a means of interpreting past lifeways. This has focused on a search for greater accuracy, authenticity, validity, correlation, personalization, and interpretation of 'historic reality' epitomized in the historical site preservation-restoration-reconstruction phenomenon. Archaeology does contribute to these goals, but they should be secondary by-products of its primary scientific function: the expla-

> nation of cultural processes responsible for past human behavior." (South, 1977b: 428-9)

This results from ethnological theories and investigations as well as from archaeological investigations. This aim is realized by adapting these theories to the comparatively incomplete archaeological data.

The series of steps that an archaeologist follows are: survey, excavation and evaluation. Although evaluation is an continuous activity throughout the process, the bulk of evaluation comes after the field work is complete.

Remote sensing is a relatively new field which is quickly being adapted to archaeological research. By use of these technologies it is possible to discover sites, evaluate them and plan excavations with much more precision than ever before, and at a much reduced cost.

LANDSCAPE

No place stands alone, without reference to other places. This is true of an archaeological site or historic property, and to understand either one must understand its environment. That environment is referred to as a "landscape."

Landscapes may be divided into two categories: natural and cultural. Although natural landscapes may owe their existence to a conscious decision to retain them as such, the distinction lies in a natural landscape's lack of overt human manipulation. This examination will focus on manipulated landscapes, and will thus be "cultural" in its perspective.

Robert Melnick, ASLA, (1984: 2) describes a cultural landscape "as a geographically definable area, possessing a significant concentration, linkage, or continuity of landscape components which are united by human use and past events, or aesthetically by plan or physical development." He further asserts that landscapes derive significance from the "quality" of human intervention. As such, landscapes can be described as economic entities which may be based in agriculture, on the extraction of natural resources, on recreation, or commercial interests. For present purposes, "quality" may be roughly translated as

"type," and "economics" is used in a broad sense of the term.

Melnick also defines a "historic landscape," in part, as a cultural landscape which is strongly associated with a significant person or event. (1980: 2) The historic landscape poses specific problems, since it is not meant to evoke a sense of process so much as a particular point in that process. Specific selection and placement of plant material provides historic accuracy that might not otherwise be a major concern, since a broader, cultural approach more concerned with over-all effect is open to a wider interpretation.

Denis Cosgrove distinguishes two usages of landscape: a literary or artistic representation of the visible world (with roots in the 15th Century), and geographical (to empirically denote the integration of human and natural phenomena). (1984: 9) This geographical perspective, in particular, can provide a basis for analysis of cultural significance, and although geography is not the focus of this work its potential to contribute theoretically is worthy of note. By looking at landscape as an interaction of forces, the dynamics which shape landscape can be better understood and management plans more appropriately formulated.

From an archaeological standpoint, landscapes have

their own significance. A particular site may be contained in a few square meters, but the site sits in relation to a larger environment. To illustrate, a comparison may be drawn between a prehistoric Eskimo village above the Arctic Circle and a prehistoric Indian village in Kansas. The former village may yield harpoon tips and indicate a maritime tradition of food gathering, while the latter may possess a number of grain-storage pits that indicate a reliance on agriculture. Neither of these traditions can be geographically transplanted to the other's environment, and both are inextricably tied to their local environments, i.e., their landscapes. By analysis of cultural debris, then, archaeologists discover clues as to the ecology of an area in the past, and derive descriptions of the processes and adaptations of humans to landscapes. Anna McCann's work at the Roman port of Cosa has similarly enlightened us about Roman technological capabilities as applied to a specific topography and climate. More generally, Roland Fletcher's work on settlement archaeology demonstrates the possibility of developing a model of settlement growth, which may elucidate the mechanics of the process as well as explain the interactions of human communities.

While archaeologists address the larger questions of human adaptation, they also analyze small-scale land uses

that may be aesthetic or utilitarian. Well known examples of this work are found in Pompeii (McKay: 143-147; also MacDougall), and application of the techniques used in such work can also be made to historical sites. Analysis of pollen and other remains can be used to reconstruct patterns of planting, and other uses, in the past. Dennis Pogue has applied archaeological techniques in his archaeological analysis of the King's Reach Plantation to determine its original arrangement and utilization, and in the process he has also gained insight as to how certain aspects of the site changed over time. Analysis of layouts and plantings at Annapolis has related landscaping to political maneuverings linked to the right to govern after the revolution. (Leone, et al.)

Landscapes are dynamic. They change and grow (or die) over time, and the nature of the change is an area of study that encompasses a number of fields (geography, ecology, planning, etc.). Melnick notes that the cultures associated with a particular landscape also change (1984: 4), and this is an area for sociologists and anthropologists. Much of the observed change in a landscape is due to human action, and this action is in response to any of a number of pressures exerted on a population. These pressures may be economic, climatic, social, etc., but the point is that they are reasoned responses rather than

capricious acts. By developing an understanding of the ways in which such responses are developed a better understanding of human behavior can be gained, as well as a better understanding of what a landscape means to the people who live within it. The management of a landscape, then, is tied to the management of social change. Many of the "quaint" cultures that survive in the United States today (such as the Amish) are of interest in part because their cultures provide mechanisms for changing while still preserving the essence of their way of life. (Melnick, 1984: 4)

The development of standards for landscape preservation has been under way for several years. Melnick (1980) lists 14 proposed standards for the National Park Service to apply to landscapes under its jurisdiction. (Cf.: Melnick, 1985: 10) In the present context it is unnecessary to list them in detail, but an overview is possible. The basic approach he outlines falls within the parameters of preservation as thus far discussed: conservative maintenance is preferred over radical replacement. Two areas of particular note to landscapes do arise, however, the first being his call to coordinate treatments with an archaeologist. Vast amounts of data are lost by uninformed maintenance, such as resodding, which could be coordinated before the fact with a minimum of added cost,

both in terms of time and money; the recovery of a damaged site will disrupt maintenance and also minimize the amount of information that the archaeologist can glean.

The second point is that "every reasonable effort shall be made to retain the appropriate cultural or historic use for the landscape..." (1980: 6). Contemporary designs are not proscribed by this attitude, but the sense of "place" is safeguarded. Plant massing, views, and other criteria used by the Forestry Department may be applied to evaluate many of these aesthetic qualities. The essential concept is one of unity in the face of change.

Melnick divides work outside the National Park Service into two categories: understanding landscapes, and managing them. In the case of the former, he states that geographical efforts may provide us with a way to "recognize the value of cultural landscapes, and adapt other methods to management needs." (1985: 2) This has been dealt with above. In the case of the latter, he sees management as a process through which it may be possible to unite goals of preservation with those of land retention in agricultural areas. The current economic difficulties in the "farm belt" may provide an opening for such work as land goes out of production and rural towns disappear. The Rural Project of the National Trust for Histo-

ric Preservation has helped to focus attention on preservation of such resources within feasible bounds, and without an aesthetic bias of scenic vistas at the expense of important regional cultural value. Even utility lines can be an important resource for preservation (Moore: 1,9) and "industrial archaeology."

Melnick goes on to list 20 activities that have impacts on rural landscapes. It will be useful to list them here since they are unique to rural environments and are rarely encountered in an urban context:

1) intensified grazing on pasture lands;
2) changes in the type of farm or ranch enterprise;
3) plowing of grassland or prairie;
4) reclamation of wetlands;
5) installation or improvement of access roads;
6) erection of new farm, ranch or mining structures;
7) erection of new fences, etc.;
8) revegetation or introduction of new plant species;
9) clear-cutting of forests or woodlots;
10) neglect or mismanagement of small woodlots;
11) afforestation of clear land;
12) removal of material components through intention or neglect;

13) additions to existing structures;

14) riverbank stabilization projects;

15) commercial enterprises, such as stores or motels;

16) installation of signs and/or billboards;

17) intensified visitor use activities;

18) installation of interpretive signs, overlooks, and displays;

19) neglect of open fields;

20) changes in vegetative cover or crop. (Ibid.: 10)

These are not activities which should be prohibited, but rather they are activities which deserve forethought before action is taken. Allowing the "market" full rein over development is not responsible management, but in the private sector there is often little recourse other than an appeal to public opinion. Education of the rural public with regard to its assets and options from the first opportunity is perhaps the best way to protect the country's varied cultural landscapes.

Aside from such natural forces as growth and neglect. Melnick focuses on two types of external pressure which act on cultural landscapes: development and neglect. (Melnick, 1984: 5) The first of these is more of a problem with rural areas that abut urban areas. The

expansion of urban areas consumes land, and the former occupants are pushed out, if not physically then culturally. The social structure that exists in rural communities may be more egalitarian than in cities. A community of 5000 people is likely to have only one Catholic church, for example, and the town's Catholics all go there without regard for social position. The town will also only have one golf course, one newspaper and one movie theater (if any at all). As institutions such as hospitals find themselves forced to move or go under as a result of the economics of scale, the services on which people depend are also undermined. (Stipe, 1980: 40) The single-unit services and businesses that characterize small towns are also the social glue that bring these communities together.

The issues discussed in this section are of importance to both preservation and to archaeology. Preservation must encompass more than simply buildings or it will fail to achieve its potential, and concern for the processes that produce the built environment is of major importance. The archaeologist's interests are somewhat different, since the bias of the discipline is toward sites with no structures that get in the way of excavation. The major concern of the archaeologist, however, is the state of the data base and the destruction of sites through

development or other terra-forming activities. The development of settlements is an area of archaeological inquiry that should prove to be of interest to preservationists as well: Maryland's 17th Century capital, St. Mary's City, has been recently shown to exhibit the earliest known use of Baroque urban planning in America. Such work would not be possible if the site were covered with a sports-dome or flooded by a reservoir. Through careful planning and forethought, the aims of preservation and archaeology can both be met through compatible procedures.

REMOTE SENSING

Laurence Kruckman defines remote sensing "as the detection, recognition or evaluation of distant objects by means of recording devices." By this broad definition the human eye may be designated as a remote sensor, and in fact it is the primary sensor in archaeological and preservation research. There are other sorts of remote sensing, however, which broaden the range of input sources which can be thus recorded. Among these are various photographic applications, magnetometers, resistivity, dowsing and metal detectors.

Photographic analysis usually refers to aerial photography. By elevating the camera high overhead, any number of features may become visible that go unnoticed on the ground, particularly if the lighting conditions are taken into account. The type of film used in these investigations also defines the type designation of any particular investigation, such as "black and white," or "infra-red."

Black and white photographs are the type most often encountered and gain their usefulness by highlighting and freezing in time the contrasts of different landforms in light. For example, the road system at Pueblo Alto, in Chaco Canyon, could not be studied on a large scale

"until remote sensing techniques became available in the 1970's."(Lekson, et al: 106; cf: Lyons & Avery, 1977: 54ff.) By timing the photo-flights to coincide with advantageous positions of the sun it was possible to define a broad expanse of roadways. The study was further aided a by second wave of treatments to enhance the contrast of the pictures and bring out details with the aid of a computer. (Lyons & Avery, 1977: 58) Thus, careful planning at the outset can make a single flight more productive than days of tramping around in the desert. Furthermore, short-term climatological features such as frost marks and parch marks can be distinguished in this way, and they often reflect cultural intrusions in the sub-soil for those trained to read the signs. (Kruckman: 344)

Color films are best used as a comparison to the black and white photos, although they can reveal similar features themselves.

Infrared films are useful in "seeing" another part of the electromagnetic spectrum. Their effective use is a matter of practice and familiarity and they come in two basic types: infrared and thermal infrared. The former is sensitive to reflected light/heat, and is considered to be a mid-day sensor for use between 10:00 a.m. and 4:00 p.m. Color or "false-color" IR films are produced

which provide increased contrasts between various surfaces, and they fall under this classification.

Thermal infrared films use a thermal detector "to transform incident radiation levels into electrical signals that can be recorded in various forms." (Kruckman: 347) This system is best used in the evening, when the thermal contrast between vegetation and various soil structures is greatest. Prehistoric garden plots have been discovered in Arizona by use of this technology. (Ibid)

Radar is an active remote sensor, in contrast to photography which merely absorbs radiation. Side-looking airborne radar (SLAR) emits electromagnetic waves and analyzes them itself. Radar systems are not affected by adverse weather conditions (such as fog) and the system is equally effective at night or during the day. Advances in radar image enhancement are making this rather expensive tool a potentially useful one. It may prove invaluable for identifying natural features and small-scale cultural features.(Kruckman: 348) Ground-penetrating radar is also proving very useful in identifying buried structures.(Kruckman: 348; Lyons & Avery: 40)

The use of a proton magnetometer has met with some success. This instrument detects the proton decay of

ferrous alloys and has proven useful in identifying large buried deposits and iron salts which occur as a result of decaying plant material, such as in dumps. The instrument is very sensitive and requires a good deal of training for the operator. This is also an expensive piece of equipment. (Hume: 38-9) Several articles which deal specifically with magnetometric surveying appear in Historic Archaeology, Vol. 17, No. 2 (1984).

A similar, but more affordable, tool is the metal detector. This instrument may be used for profitable research as well as for mere financial gain. This device allows the researcher to "see" metal objects below the surface and to pinpoint their locations, which makes it an invaluable tool for planning a dig on a historic site. Furthermore, it seems obvious that a researcher who has become familiar with a particular instrument may be able to use it to "read" a patch of ground or the walls inside a standing structure. By noting signal positions and types, every nail and electrical or gas fixture within a wall could be noted and preservation work planned on the basis of the results.

Dowsing is a phenomenon that no one has been able to explain, although many use it. Hume swears by the use of "angle rods", which are no more than bent coat hangers. (Hume: 37-9) By using these rods, he has traced foundations and discovered objects as small as a bullet.

These are a few of the resources available to the researcher in this field. The Department of the Interior has published a series of reports and handbooks on the subject. This brief summary is merely meant to familiarize the reader with some of the possible resources available as well as their applications.

PHOTOGRAMMETRY

A recording strategy which is especially pertinent to doomed properties is the field of "photogrammetry." By careful selection of the subject, placement of cameras, etc. valuable records can be made which will serve to document structures and features with remarkable precision. "Photogrammetry is the science of measuring by means of photography." (Borchers: 1) The techniques of photogrammetric recording are precise and complex, but a general description is possible.

The photogrammetric process is in two stages: the actual controlled photography on a site, and the orientation and measurement of the photos in a lab. In the first phase, rectified, stereoscopic photos are obtained by orienting two cameras to the subject in such a way that distortion from perspective is essentially eliminated. Selection of lenses and lighting are important factors, as well as the positioning of the cameras so as to put them in line with the center of the subject. In this way a stereoscopic record of the subject can be made, and the large-format cameras used in the process ensure that the record is also extremely detailed. Centering the cameras may entail some risk, since it will often mean raising them to point level with the center of a building that may be several stories tall. Even if the building is photo-

graphed in sections, the same central orientation will be required for each section. Alternate perspectives should also be taken to enable other analyses to proceed.

The analysis of the photos thus obtained is carefully done in order to derive accurate drawings of the subjects. The rectified photos may be used to make orthographic drawings of facades, cornices, etc., and the perspective shots may be further rectified in the lab to provide diagrams. This analysis is detailed and specialized, and must be conducted by trained professionals to ensure acceptable results. Further, there are limits to the possibilities of such interpretation due to the resolution of films, the degree to which complete photographic coverage may be obtained, etc. There is no real substitute for actually physically measuring and graphically recording structures, but these methods do provide an alternative. It should also be noted that they are well accepted in the archaeological community, and particularly in the field of under-water archaeology. By suspending cameras on elevated grids, accurate maps are made on land and precious diving time is saved. (Bass: 104ff; St. John Wilkes: 183-193.)

Conclusions and Recommendations

The preceding examination has looked at the subject of interdisciplinary research, and the respective milieus of historic preservation and archaeology. An attempt has been made to focus on philosophical and methodological considerations in each of the two fields without trying to provide an exhaustive discussion of their respective parameters. The examination now allows some comparisons to be made and to delineate potential areas of cooperation and contention between them. In this section areas of mutual benefit are identified which may provide a basis for cooperation between the disciplines. It is hoped that discussion will help to spark cooperation, and will lead to a better understanding of how preservation and archaeology can broaden public appreciation of our heritage and further the aims of both fields.

Preservation and archaeology share a general framework in their respective processes: the steps survey, evaluation and site-work. There is a dissimilarity in the order of the steps, however, and that can be put to advantage by allowing archaeological investigation to take place in conjunction with the evaluative process of preservation. Such a dove-tailing of interests exemplifies the approach espoused in this work.

Creativity and cooperative interaction can help to ensure that a maximum of information is secured about a site, and can also enhance funding options for related projects.

Areas in which preservation stands to gain from archaeology can be divided into two general categories: theoretical and evidential. Benefits to theory stem from the archaeological perspective on the relation between people and their physical environment, and how people conceptualize such a relationship across time and/or space. This perspective provides a framework for generalizations to help guide research. The effects of theoretical perspective are seen in every aspect of the preservation process, from planning a survey (and what should be included in it) to the site-work and final disposition of a property. The archaeologist's views on cultural affinity and relative importance also bear directly on the question of "significance." The integration of new ideas and needs with more familiar approaches will inevitably produce friction, but the long-term vitality of the field (or any field) depends on its ability to adapt.

Evidential gains for preservation will primarily derive from excavation. The tiny chips of china and rusted door latches that turn up in a family dump can provide a wealth of information relating to furnishings

and the relative fortunes of the property's inhabitants over the years. The correct placement of outbuildings can be problematic if they have long-since disappeared, but excavation can provide locations and dimensions for them. From those dimensions, an architectural historian may be able to reconstruct the buildings themselves. The evidence for such reconstructions may be fragile, however, and that is one reason for coordinating the activities between fields. By preceding reconstruction with excavation, two things are accomplished: invaluable information for reconstruction can be provided, and fragile artifacts are preserved that might otherwise have been crushed by a truck or back-hoe during site-work.

Archaeology has lessons to learn from preservation as well. There are few laws that protect archaeological sites alone; most protective laws cover historical and cultural sites as well. Familiarity with these laws, their ramifications, and the mechanisms by which they are implemented is a valuable commodity. The successful application of these laws by the archaeological community has been haphazard and rather naive up to this point. Also, by integrating their activities with local planning bodies and social groups, archaeologists can enhance their profession by making it timely and desirable to funding bodies.

Archaeology has never lacked public interest, but it generally lacks public financial support. One reason for this is that it is seen as a dead-end investment by governments, whereas preservation may at least hold the promise of some new growth in a neighborhood. Archaeologists belong in that process of growth and social awareness, coupled with political acuity. Preservationists have come to understand both the laws and the process of bringing them to bear on a project, both in City Hall and in the neighborhoods. The popular message of archaeology might be characterized as one reminding us of where this nation came from and, by extension, where we fit into its heritage. While the aims of archaeological research may often be more theoretical, it is well to remember the public and to be sympathetic to their desires and expectations.

For the consideration of buildings as artifacts, the body of architectural theory may be advantageously applied to historical archaeology. Ethnic variations of standing structures can provide an area of research that transcends either architecture or archaeology alone. Of particular note in this regard is the book A Pattern Language, by Christopher Alexander, et al. While the book is meant for designers, it provides a system of organising and describing space and structure that may be adaptable to a predictive model.

Following are a few general suggestions to aid interdisciplinary research. With regard to jargon, it will be helpful to try to avoid excessive use of field-specific terminology. There is nothing to be gained by couching one's observations in such terms, and although they may be very precise in their meanings, they do not clarify when the reader is unfamiliar with them. The result will be confusion and needless misunderstanding at best, and possibly recalcitrance and resentment on the part of those one is trying to reach.

In order to avoid the need to over-simplify one's thoughts, it will be useful for those involved in each discipline to read some of the journals and publications in the other field. These need not be learned quarterly journals of endless pages of tiny type (which will be couched in the jargon warned against above) and they need not be read cover-to-cover. The Old House Journal and Preservation Forum are filled with articles directed toward the public and provide an interesting introduction to historic preservation. Archaeology and Historical Archaeology provide the same sort of information for preservationists, and while the latter publication may be somewhat more difficult to read, it is one that preservationists should find very useful. The National Park Service's CRM Bulletin is a 10-page

quarterly publication which deals directly with issues of interest to both disciplines, and many states have similar publications available. Through the perusal of such publications, the gap between the fields may be narrowed, at least to a degree.

Theoretical considerations are a problem area. Historic preservation is in the process of developing a well-defined theoretical basis for its work. Archaeology has been developing such a theoretical framework for a hundred years. Jurisdictional disputes are a likely outcome as the two fields vie for funds and manpower, but the mutual interests of both should provide a basis for cooperation rather than conflict. Preservation and archaeology are both marginally funded at all levels of government, and both feel the pinch. Efforts should be made to ensure that both fields prosper. By coordinating activities from the start, projects can be undertaken which allow both fields to fulfill their respective goals. The discovery of an important Indian site on the grounds of a stately mansion should be seen less as a nuisance than as an opportunity to depict changes in human uses of the area. Archaeologists need to be aware that the costs of their excavations both in time and money may make a preservation project fiscally impossible. In such cases a compromise must be worked out to ensure that work is

completed with a minimum of damage to cultural features that may remain underground.

Much of the present preservation philosophy is guided by the National Park Service. While private organizations and individuals may not hope to match the resources of the National Park Service, its attitude toward conservation of artifacts should be emulated. When archaeologists remove artifacts from the ground they acknowledge the responsibility of caring for them and preserving them for future study. It is tacitly accepted that much the same responsibility rests with those who preserve buildings, and the Secretary's Standards reinforce that approach. Planning for maintenance and upkeep on preserved structures should be designed with future study in mind as well.

The term "significant" is frequently encountered as a criterion for inclusion in many programs. It is a term that engenders some disagreement since it may not be demonstrable in all applicable situations. The "primary" and "contributing" aspects of cultural landscapes are often not easily defined so that they will fit the criteria set forth in the Standards. (Melnick, 1984: 4-5) The question of "What is significant?" will have to be faced as the ranges of archaeology and preservation activities broaden.

Professional services are an accepted reality in both disciplines. The preservationist relies on architects, historians, and a host of specialists to provide expertise. Likewise, the archaeologist will prefer experienced help to excavate quickly and efficiently, and while student help has been a mainstay of archaeological fieldwork for years, it alone is no longer adequate to the job. This is particularly true with regard to a preservation project, since the time spent educating students may be considerable, and that translates into added delay and expense. Apprenticeship or internship programs could help to bridge the gap between student and expert.

In this examination, both preservation and archaeology have been broken down into three parts: survey, evaluation, and site-work. It is noteworthy that the same general activities occur in both fields, but that the sequence is altered. While in preservation the order just given is followed, archaeologists proceed from survey to site-work to evaluation. This is not to say that there is no evaluation at all before excavation, but the bulk of interpretation occurs once the artifacts and data have been collected. By planning and allowing time to derive preliminary archaeological evaluations, it should be possible to more effectively evaluate a site or property for preservation. False starts and erroneous assumptions can

cause delays and inaccurate restorations as well as the destruction of valuable information and artifacts. Delays can be expensive, and inaccuracies can jeopardize funding and support. The archaeologists' reports may not always bring welcome news, and may well dispel long-cherished beliefs, but they are reflections of the past and should be respected as such. Future generations will judge us by what we have preserved of their heritage, not by how well we have defended our publicly-stated positions.

The inclusion of an archaeologist on a team has been shown to be useful, but what of the reverse? A preservation specialist can be of immense help to the archaeologist as well, particularly if that specialist is an architect. The nature of an archaeologist's work is such that comparatively little attention is paid to standing structures. The advent of historical archaeology has had a salutary effect on this situation, but a jack-of-all-trades is still master of none. Just as a prehistoric archaeologist may not be expected to notice historic sites as a matter of course (and the reverse for a historic archaeologist), the availability of a professional in the built environment will help ensure that important information is not lost through ignorance as excavation proceeds. Additionally, such a presence will aid in evaluation and planning for the final site work, including any

changes in site-specific goals that may arise as a result of excavation.

Coordinating the excavation and reconstruction work is only part of the picture. Heavy equipment will crush buried artifacts, and excavation essentially destroys a site for most archaeological purposes. Planning and maintenance should have as a goal the preservation of the archaeological record as well as buildings. Legitimate excavation cannot compete with looting and development in the destruction of archaeological sites, and while excavation is "planned destruction" it still contributes to the loss of our national archaeological data base. One attempt to help alleviate this problem is the establishment of LOOT (short for "looting") by the Archaeological Assistance Division of the National Park Service. This is a database of looting and vandalism prosecutions. By improving the information collecting capabilities of a central authority, coordination between law enforcement and regional archaeological resource protection may be enhanced. (CRM Bulletin, Vol. 11, Nos. 5 & 6, 1988: 20) Further information about archaeological sites in North America should also be collected, and analysis of such data will greatly enhance our capacity to plan for digs on a larger scale. (Knudson: 73) Preservation, then, should not only be limited to structures.

"There has never been any definition of the socioeconomic costs related to archaeological destruction" (Ibid.), and such a definition would be invaluable in dealing with legislators. Only about a third of the United States is legally protected from looting and vandalism, and the expertise developed in the preservation movement would be enormously helpful to archaeology. Since only selected remnants of an excavated site can be stored for the future to begin with, the need to preserve sites is immediate. (Ibid.: 72)

The integration of databases between disciplines is another area of interest. The Department of the Interior has established LEAP (Listing of Education in Archaeology Projects) and the HSPD (Historic Structures Preservation Database). Both of these computer-based networks use dBASE III Plus programs and a "MS-" or "PC-DOS" operating system (Battle: 2-1; CRM Bulletin, Vol. 11, No. 5 & 6: 18-19), and it is recommended that further data collection and analysis in archaeology and historic preservation be designed to be compatible with this system. It is planned for LOOT to use a dBASE III or dBASE IV program by spring of 1989. (Ibid., CRM Bulletin: 19)

Adequate funding is also necessary for both disciplines to do their work. It is not responsible to decide to proceed with a project without assessing its costs and

providing for them. For archaeologists that particularly means publishing the results of the work. David Armour writes, "...if we receive $5,000 for a project, we should probably allocate only $1,000 for excavation and $4,000 for analysis and publication." (Armour: 4) This often comes as a shock to people who think that archaeology is digging, but it is hoped that the foregoing chapters on the subject have dispelled that notion. Proper understanding of the methods and attendant costs for both historic preservation and archaeology would allow grant proposals to be written more realistically and help to gain more adequate budgets for all facets of the work. In the longer term, the storage of artifacts needs the same degree of consideration as periodic maintenance of the structure and grounds.

Funding for a project will likely come from several sources, and planning will need to involve writing and submitting grant proposals. A grant may cover only a specific aspect of a project (such as excavation) and writing the grant proposal will fall on the segment of the team responsible for carrying out that phase of the work. It is also recommended that the people writing a proposal be familiar with the granting agency and its regulations and procedures, as well as its aims. Agencies that carry responsibility for a project carried out under its

auspices, "will insist on exercising authority equal to the responsibilities." (Flynn: 45) This is true of governmental agencies as well as of private industries that are conducting work under governmental contract, or through some more altruistic motive. An ability to negotiate effectively with people in an agency, according to that agency's criteria, will pay dividends over time.

The amount of archaeological fieldwork to be done has grown in recent years, largely as a result of federal regulations. This has spawned "contract archaeology," which has a preservation counterpart in professional preservationists. Both of these groups provide needed services for a fee, and both have academic counterparts. While authorship is a criterion for advancement in academia, teamwork is the criterion in the private sector. (Fitting: 71) Academic institutions provide capitalization for research activities, but initial capital formation for other groups "is usually provided by individuals going into business for themselves...Ultimately all institutions are involved either directly or indirectly in a profit oriented economic system. Variations are of degree, not of kind." (Ibid.: 73) The criteria for success and economic feasibility differ between the private and academic sectors, and the pressures and motivations of each need to be examined in depth and interrelated.

Some proposals have been made which are designed to maintain private and public aspects of the archaeological community. (Davis: 124-126) These may also be applied to the historic preservation community, and may serve as a springboard to similar contacts between historic preservation and archaeology.

Training is a logical place to start, and for CRM (Cultural Resource Management) archaeology "The primary need is for good training in anthropology and anthropological archaeology." (Ibid.: 124) Such training might also benefit students of preservation in that an early exposure to general anthropological principles could provide a basis for their understanding of social and cultural processes, and a broader perspective on preservation and "significance." It is also recommended that archaeology students take some introductory architecture coursework, for much the same reasons.

Davis also suggests that graduate students have a chance to participate in the drafting and submission of contract and grant proposals. Proficiency in such work will become increasingly important in the future, and the use of student labor is a valuable opportunity for training.

Theses and dissertations may grow out of contract work, which can provide another avenue of communication.

Such an approach will also help to mitigate the student's expenses while pursuing an advanced degree.

Temporary personnel exchanges are an avenue that can include students (internships) and professionals (guest lecturers). Exchanges help to keep everyone involved up to date and enhance communication between the private and academic sectors, and between people at different levels on the organizational chart.

Another avenue of communication can be opened through peer review. Particularly at the planning level, advice from one's peers can save time and money, and point out potential conflicts of interest before they become problems. Review may also improve research designs for both fields by integrating goals and implementation plans.

Research projects are another of Davis' ways in which both disciplines can work with and learn about one another. The rates of decay of various building materials with regard to different climates represent one such area. While these have been studied by various private and governmental entities, a comprehensive analysis would be extremely useful. It is unlikely that such a study has been devoted to, for example, the sod house of the Great Plains, yet this vernacular building type is quite important to the history of the settlement of that area. Studies would help plan maintenance of extant structures,

and might be designed to also provide information as to the way in which such structures disintegrate. By knowing how they disintegrate, archaeologists can derive models which will allow more accurate reconstructions of similar vanished structures. This description is hypothetical, and similar approaches to other research questions are possible. Such an approach to research is centered around the collection of data, and thus does not violate Dorn's proscription against ad hoc, "mission-oriented" alliances. (Dorn: 30) Pure research is vital to both fields. This is not to say that there should be no mission-oriented alliances, and there may be no alternatives: opportunities for broader investigations should not be squandered, and goals should be stated in such a way as to provide for them.

Historic preservation has been quite successful in harnessing public enthusiasm, and archaeologists could learn from preservation's successes and failures. Much of the planning for historic preservation often revolves around public access, while archaeological sites are generally kept as inaccessible as possible. This secrecy is a logical response to looting and a general feeling that visitors disrupt the work. While both of these are reasonable concerns, they may also help to explain why archaeology is generally so poorly funded: public educa-

cation and involvement often translates into monetary and political support. Archaeological concerns about the destruction of sites indicate a growing need to marshal broad support for their preservation, such as is being done by the Archaeological Conservancy and the American Society for Conservation Archaeology. Experience acquired by the historic preservation community could be applied to archaeological projects as well.

Issues of funding and public education are among those discussed as areas of concern in Preservation: Toward an Ethic in the 1980s (National Trust: 28-33, 45-49), along with possible enabling steps and means of implementation. Knudson is also aware of the potential of education,and notes that the Alberta Archaeological Survey has cooperated with Alberta Education to introduce archaeology into 4th-grade classrooms. (Knudson: 106) By instilling an appreciation of our heritage in the public, future support becomes more likely. Education breeds understanding, which is the first step in winning funds.

A part of public education will be directed toward "cultural tourism" (Ibid.) and the money it generates. This is important for two reasons, and the first is the positive effect that archaeological and historic sites can have on preservation. Popular sites will generate money for the local economy, possibly providing new jobs and

broader opportunities for the local population. The money thus generated will give rise to the second reason, and that is a public awareness that the "golden goose" should be protected and preserved. (Ibid.) This latter attitude of preservation, however mercenary its motive, is a source of public involvement, which will help ease the burden of policing sites as well: there are many times more citizens in a county or town than there are police. (See Green and Davis for in-depth examination of issues surrounding law enforcement and cultural resources.)

The long-term protection of sites and properties will require professional planning. Ronald Fleming, a professional planner, takes archaeologists and preservationists to task for not being aggressive enough in finding out what they can do through a broad range of funding agencies, such as 701 planning grants, residential rehabilitation monies. He also chides them for not working effectively with local authorities to hammer out trade-offs, such as with Portsmouth and Strawberry Bank in New Hampshire. Here housing was in short supply, but the decision was made to preserve 30 old houses and relocate 90 families. It is possible that a larger area could have been saved in exchange for rehabilitation and accomodation of low income people, rather than to delete 30 houses from the tax roles altogether. (Fleming: 51) Writing in 1971,

Fleming envisions a socially conscious role for archaeology and preservation, and the point of his argument remains valid: one's negotiating position with a body improves as one is seen to be meeting that body's agenda. (Ibid.) With that in mind, Fleming lists five "New Uses for Historical Archaeology:"

1) excavations can be employed to weld community consciousness and clear up myths and cliches;
2) descriptions and exhibits can be coordinated with planners to enhance neighborhood identity and spark local conservation programs;
3) archaeological work can serve as a focal point for community organization for preservation efforts;
4) projects can be used to induce changes in school curricula;
5) archaeological work can be used to foster environmental education programs in the community at large. (Ibid.: 56)

These possibilities may not represent anything like an exhaustive list. It is likely that emerging social and environmental changes will suggest other uses not currently apparent. These points are applicable to historic preservation as well as to archaeology.

The era is past when an individual could have total control over every facet of a preservation or archeaological project. Complex interactions between people and technologies will require a professional manager to oversee the process, and that person is currently referred to as a "cultural resource manager." Some serious thought should be given to appropriate training for such positions, and to the training context (classroom or on-the-job, and in what proportions). Grants will need to be coordinated as well as supplies, and it will be necessary to look several projects ahead. (Fitting: 71) Technical prowess will also be required over a broad range of activities and fields, at least to the extent that informed decisions can be made. Accommodations for such a position should be earnestly discussed in both the archaeology and the preservation communities since the implications are far-reaching. "There is an urgent need for archaeologists [and preservationists] to decide on acceptable approaches before specific theoretical and procedural models are institutionalized in planning processes." ("IAS Guidelines and Comments:" 22) By anticipating needs and preparing people to fill them, archaeologists and preservationists can enhance their combined influence and help to serve the public good.

With integrated philosophies and methodologies, from

college through their professional careers, preservationists and archaeologists can forge a strong coalition. By working with community leaders and planners they can help make neighborhoods better places in which to live. Through coordination with appropriate agencies, they can gain a new sense of purpose through the evolving field of cultural resource management. All of these possibilities, offer opportunities for preservation and archaeology, but they will come to naught without an acknowledgment of mutual interest and a resolve to work together. The tacit understanding that the two disciplines are linked is evidenced by books such as The Restoration Manual (Bullock), which devotes a great deal of space to archaeology, and by conferences such as Architecture in Cultural Change (See Saile). Such efforts foster understanding and fresh perspectives, and it is hoped that this study will help to advance those efforts. Through the integration of goals and methods, through cooperation with each other and with other entities, and through an openness to new perspectives, we can not only ensure a future for the past, but improve the prospects for the future of the future.

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APPENDIX

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International Centre for the Study of the
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Library of Congress
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National Association of Real Estate Investment
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For computer hook-ups to National Park Service information:

George S. Smith
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A useful government publication is the Federal Assistance Guide for Parks and Recreation Professionals. It is published by the Heritage Conservation and Recreation Service, Information Exchange, U.S. Department of the Interior.

ARCHAEOLOGY, SYNCRETISM AND HISTORIC PRESERVATION

by

ROBERT LEE BEARDSLEY

B.S., Kansas State University, 1983

AN ABSTRACT FOR A THESIS

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No field of study exists in a vacuum, but some fields are more amenable to cooperative endeavor than others. Archaeology and historic preservation are two fields with a great deal of potential for cooperation, and this paper examines conceptual and methodological avenues of cooperation. Conflicts are also addressed and recommendations made for their further study and resolution. Each field is represented in the chronological order in which a participant would proceed.

The introduction defines parameters for the investigation. Common philosophical derivations for preservation and archaeology are described.

The chapter on interdisciplinary research examines concepts which guide the conduct of work that overlaps two or more disciplines. This section elaborates on methodological premises upon which the work that follows it will build.

The section on historic preservation includes information concerning the field's current state. The political and social aspects of the field and its milieu are examined with emphasis on the legal structure of preservation. Surveying techniques, evaluative techniques, and protective strategies are described under separate headings, and areas of overlap or conflict with archaeology are identified in the text.

The section on archaeology follows a similar format to that on historic preservation. The background of American archaeology (as opposed to Old World archaeology) is provided, followed by descriptions of methods of surveying, excavating and evaluating material. Each topic is examined under a separate heading, and comparisons to methods used in historic preservation are made.

The chapter "Landscape" acknowledges that every site exists within a larger environment, which may be perceived in various ways. Differing approaches to landscape are described for each of the two disciplines.

"Remote Sensing" looks at the emerging field of non-invasive examination. There are implications for both fields that derive from the introduction of these technologies; some of these implications are examined along with the technologies that spawned them.

Photogrammetry is examined to illustrate the reliance of both fields on this science. Data collected by both fields, acting independently, exemplify the possibilities that exist to share information across disciplines.

The final chapter summarizes the main points and observations. It identifies some areas of mutual benefit, and examines the roles of the two fields in society as a whole, and makes recommendations.