

Deciding the Future of the Past: The Miami Circle and Archaeological Preservation

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1. Introduction

Both the city of Miami, Florida, and surrounding Miami-Dade County strongly enforce historic preservation ordinances to prevent destruction of archaeological sites in their districts. Codes are in place requiring any excavator, including a developer, to hire an archaeologist to oversee the excavation of a potentially valuable site and to halt construction of the project, if necessary, to conduct an archaeological dig. The excavator or developer must pay for both the archaeological oversight and any subsequent investigations.

These local ordinances are popular with individuals who value the opportunity to learn from archaeological sites. While the local ordinances are usually straightforward and have been helpful in bringing about research and conservation in some situations, they are not getting the whole job done. This *Backgrounder* explains their limitations and disadvantages, and recommends changes that would lead to better protection of the property interests and development rights of individuals.

The report first narrates the events following the discovery of the Miami Circle in downtown Miami. The controversy surrounding that site and the apparent conflicts between builders and archaeologists and between the city and county governments highlight the problems of existing regulations.

The second section gives an overview of modern archaeology. It describes the strong desire of archaeologists, historians, and others to conserve elements of our human past and thereby to learn more from them. It also describes the sometimes-conflicting goals of archaeology and economic development.

The third section points out the drawbacks of the current “command-and-control”

approach, which forces developers and landowners to pay for archaeological work and to halt projects in order to accommodate archaeology, all without compensation. The incentives that result do not encourage voluntary cooperation or preservation. At the same time, they often may make the development less attractive to investors.

The fourth section recommends changes to reduce the limitations and the disadvantages of both current archaeological practices and the current legal environment, and changes that would lead to greater gains from archaeological research.

Archaeology does not have to conflict with the interest of landowners who seek the highest value and best use of their property. With the proper incentives and institutional arrangements, the goals of owners, developers, collectors, and archaeologists should seldom be in serious or acrimonious conflict.

2. The Miami Circle Challenge

“Centuries or millennia after its creation, the formation still seems sacred, partly because of its apparent function as a temple or astronomical device, partly because it has survived for so long, partly because it sits in the middle of a busy, modern megalopolis,” reported the *Miami Herald*.¹ Since this story broke in January 1999, the formation now known universally as the Miami Circle has generated unprecedented popular interest in archaeology and in the often-neglected history of American Indians. There has been a contentious debate about what will be done with the Circle. Solutions ranged from digging up the stone formation and moving it to another site for display, to keeping it intact at its current location as the center of an archaeological preserve.

Despite the important archaeological information that the Miami Circle may contain, its fate has largely been decided in

the political arena. Almost from the start, the combination of media attention and public interest created the kind of setting that attracts political intervention. Representatives from local, state, and federal government have all weighed in with proposals to save the site.

When developer Michael Baumann bought the 2.2 acres on the south bank of the Miami River at the point where it empties into Biscayne Bay, it was home to a rather unassuming 1950s-era apartment complex clearly beginning to show its age. While the property and its hidden treasures remained unchanged for decades, the surrounding area had been turned into expensive real estate. With neighbors that include the Sheraton Biscayne Bay Hotel and the Dupont Plaza Hotel, it seemed a logical location for the upscale project Baumann and his team had in mind.

The \$8 million waterfront property was to become Brickell Pointe, a commercial development that would also include twin towers housing 600 apartments. Estimates of the value of the completed project ranged from \$90 to \$126 million. But progress was halted when, after clearing the land, an archaeological find brought unprecedented media exposure.

While rapidly growing South Florida, and especially Miami, sometimes appear to be bent on development at all costs, Miami-Dade County and the City of Miami passed ordinances in the early 1980s to help preserve archaeological sites and artifacts. The regulations require archaeological concerns to be considered before building permits are granted. While pre-construction excavations were being conducted at the Brickell Pointe site, archaeologists came across a surprising discovery.

Like many archaeological finds, the Miami Circle is unimpressive to the un-

trained eye. The 38-foot wide circle, formed by a series of 24 holes of various shapes dug into the limestone bedrock, is clear to a casual observer. The pattern is overlaid with a series of 200 smaller holes that appear to have no obvious pattern, and these are scattered both inside and outside the Circle. The scene is further confused by the presence of a rectangular concrete septic tank that appears to be perfectly aligned with the Circle.

Archaeologists specialize in seeing things that a layperson overlooks in the physical record of the past, and they found the site much more intriguing. While the developer awaited permission to resume the project, archaeologists John Ricisak, the field director of the dig, and his supervisor, Robert Carr, then director of Miami-Dade County's Historic Preservation Division, saw what appeared to be the foundation of an ancient structure dug into the limestone buried three feet below the surface. When the public got news of the discovery, theories about the origin of the Circle—some of them very unconventional—began to spread through newspapers, radio programs, and the Internet.

The fact that ax blades made from material not found in Florida were discovered at the site led some to hypothesize that the Circle was the first solid evidence that Central America's ancient Maya civilization had reached the state in pre-Columbian times. Others saw the Circle as the foundation of an ancient solar calendar, an American Stonehenge. Still others went so far as to label it the site of ancient contact with extraterrestrials. While these theories and more were swirling around the air waves and cyberspace stoking interest in the circle, archaeologists Ricisak and Carr came to a more conventional explanation.

They believed the site was the foundation

for a temple or hut constructed by the Tequesta Indians, a tribe that inhabited much of South Florida before the arrival of European explorers. The Tequestas, whose numbers may have been as high as 10,000, were part of what archaeologists call the Glades Culture. The area the Glades Indians inhabited included “a variety of wetlands: the Everglades, the large sawgrass marsh in Hen[d]ry, Palm Beach, Broward, Miami-Dade and Monroe counties,” according to archaeologist Jerald T. Milanich.² While the Tequestas thrived in this area, including the region around the mouth of the Miami River, wars and disease brought about by contact with European explorers devastated their population. The last members of the culture are believed to have left the area when Spanish colonists abandoned the state to England in 1763, but evidence of their experience has been scarce. According to Milanich, “Only a small sample of sites remains. Even sites recorded in the 1950s have been lost to development. It is hard to imagine that early in the 20th century, what is now a row of glitzy hotels, apartments, and shops on Biscayne Bay was shell middens.”³

As word spread that the Circle was probably of American Indian origin, saving it became a cause célèbre among environmental activists, school children, preservationists, and American Indians. Bobbie Billie, spiritual leader of Florida’s Seminole Indians, captured the sentiment of many when he declared the site sacred ground. This opinion was given increased weight when archaeologist Carr was quoted in the *Miami Herald* as saying, “It’s some kind of sacred place.”⁴

City and County Involvement

While public attention surrounding the fate of the site was growing, the city granted the

necessary permits for Baumann to resume construction of Brickell Pointe. Acknowledging widespread public desire to preserve the Circle, Miami Mayor Joe Carollo announced that plans were being drawn up to move it to another site, which would allow archaeologists to continue their research while construction began. Dissatisfied with the possibility that the Circle would be moved, however, attorneys for Dade Heritage Trust unsuccessfully filed for an injunction to prevent further construction. Even so, Baumann agreed to delay work and allowed archaeologists to remain for several more weeks.⁵

As local political leaders began to take on an increasingly vocal role in the Miami Circle debate, a growing rift became apparent between the views of city and county leadership. Carollo, anxious for the city government that has a history of financial problems to receive the tax revenue that Baumann’s project would generate, led efforts to allow construction to continue. Miami-Dade County Mayor Alex Penelas, whose budget would receive less of the tax revenue from Brickell Pointe, began to be seen as the leader in the movement to preserve the Circle at its current location. This confrontation came to a head on February 18, 1999, when the Miami-Dade County Commission voted 10-1 in favor of using eminent domain to obtain the land surrounding the Miami Circle.

Eminent domain allows the government to require a private landowner to sell to the government if it can be proven that the land serves a public purpose. The county voted to pursue a “slow take,” which would allow it to decide not to purchase the site if the price turned out to be too high.

County hopes for purchasing the site were given a boost when the state cabinet⁶ voted to make the Circle a priority for pur-

chase under a state land acquisition program. Under the agreement, the cabinet would contribute funds for the purchase “at its appraised value or at 50 percent of the developer’s selling price, whichever is cheaper.”⁷ A jury trial set to begin October 4, 1999, was to decide the price of the Circle. However, last-minute negotiations between the two parties reached a settlement that avoided the uncertainties of a trial.

A Resolution to the Challenge

While the final \$26.7 million dollar settlement far exceeded the \$8 million Baumann paid for the property, county officials were eager to avoid a potentially bigger hit that the trial jury could have imposed. “We have avoided a runaway jury from coming back with some outrageous amount,”⁸ said Penelas. Estimates by Baumann’s appraisers had set the value of the land as high as \$42 million.

The \$26.7 million price tag included \$25 million for the land and \$1.7 million to compensate Baumann for legal fees. The state agreed to provide \$15 million and the county the remainder. Originally, the county could raise only \$3 million for its portion of the deal. But a last-minute loan from the San Francisco-based Trust for Public Land organization gave it the remaining funds. The county now has two years to repay the loan.

While state and local governments were moving forward with pledges, questions remained about the authenticity of the site. Florida Attorney General Bob Butterworth asked, “If this thing turns out to be a septic tank, we’ve just bought a \$15 million septic tank, right?”⁹ At least one prominent archaeologist seemed to share Butterworth’s fear. Milanich, curator of archaeology at the Florida Museum of Natural History at the University of Florida in Gainesville, ex-

pressed uncertainty about the origin of the Circle and refused to rule out a more contemporary explanation for its development. Contrary to the popular opinion that it is of ancient Tequesta origin, Milanich stated his intention in a leading archaeology magazine to “remain skeptical until sufficient evidence is collected to prove that the Miami Circle was built by Native Americans one or two thousand years ago and is not a 20th-century artifact.”¹⁰ Following the agreement between Baumann and the county, renewed research at the site strengthened the conclusion that the Circle is, in fact, of ancient origin.

And while the state and local governments were ready to pay millions of dollars for the land, the public itself seemed unwilling to put forth the substantial sums needed for such a deal. Lack of private funds for the purchase drew the ire of county commissioners when they voted to approve the agreement. County Commissioner Natacha Millan singled out Indian tribes for failing to raise funds towards the Circle’s purchase. “Where are the people who say this is sacred?” Millan said. “It does not seem like any of these tribes or the nations have any problems with money.”¹¹ Six months after the cause became widespread, the acquisition fund set up to raise money from the public for the Circle’s purchase had a balance of \$4,012.¹²

3. Modern Archaeology

“The past is big business in tourism and in the auction rooms. The past is politically highly charged, ideologically powerful and significant. And the past, or what remains of it, is subject to increasing destruction.”¹³ This statement by two of the world’s leading archaeologists, Lord Colin Renfrew and Paul Bahn, says a lot about the state of archaeology today. It is especially true in light of the way that markets are perceived

by archaeologists.

The code of ethics of the Society for American Archaeology includes the following statement:

Whenever possible [archaeologists] should discourage, and should themselves avoid, activities that enhance the commercial value of archaeological objects, especially objects that are not curated in public institutions, or readily available for scientific study, public interpretation, and display.

Ironically, this view of markets as destructive has become, in part at least, a self-fulfilling prophecy. When ethical archaeologists refuse to participate in markets, unethical archaeologists will. It is true that markets reward those who disturb sites and damage or destroy their value in doing so, but that need not be the case.

Since markets are not part of normal archaeology, professionals have increasingly turned to the public sector for support. As a result, public institutions and public decision making now determine the course of modern archaeology. Faced with challenges such as a lack of funding, the problem of looting, and the constant threat of lost opportunities due to economic growth, archaeologists have increasingly turned to the government to help save archaeological records. This reliance on government has had mixed results.

Funding for Archaeological Research

Archaeological discoveries do more than provide amusement for the public. They allow us to gain valuable insight into the past, which otherwise might remain inaccessible to us. According to Renfrew and Bahn, “The history of archaeology is commonly seen as the history of great discoveries.”¹⁴

The 1799 unearthing of the Rosetta Stone in Egypt illustrates the impact a discovery can have on understanding the past.

The stone’s engraving that marked the anniversary of Ptolemy V’s coronation was repeated in ancient Greek and two Egyptian languages. Use of the Greek language provided the information that scholars needed to decode ancient Egyptian writing.¹⁵

Because of such discoveries, archaeology is often seen as providing a public good, and this perspective has given rise to what is called “public archaeology,” in which the money for archaeological excavations is provided by the government for use by certified archaeological experts. The ability of archaeologists to use the funds productively is increasing with technology.

Archaeology has become more expensive in recent times as the methods and techniques of professionals have become more advanced and thus their work more productive. Techniques such as radio carbon dating, which allow archaeologists to determine the age of artifacts with much greater accuracy than ever before, adds value to knowledge, but at a cost. According to one expert:

Early in this century, archaeology was more of a hobby for antiquarians than other people interested in history. Today, however, archaeology is a true science that makes use of various scientific methods to locate, excavate, remove and date archaeological sites. Today, archaeologists use sonar, satellite imagery, infrared imagery, radio carbon dating, DNA analysis, tree ring analysis, soil and pollen analysis, potassium-argon dating, thermoluminescence dating, and a variety of other sophisticated scientific techniques in order to not only date objects found in archaeological settings but also to discover the pests, diseases, travel patterns, trade patterns, living conditions, political structure, diet, age, migration patterns, homogeneity, life span, and other characteristics of the ancient peoples.¹⁶

Given these advanced techniques, rising

costs have increasingly become a major impediment to quality archaeological research. According to Renfrew and Bahn, “A major project may cost in the order of \$1 million, whereas a research grant from the National Science Foundation will rarely exceed \$100,000.”¹⁷ To make up for this lack of funding, some archaeological excavations increasingly rely on commercial funds.

“Sponsorship has become integral to archaeology,” wrote one commentator, “as it has to a sport like motor racing. As the money flowing from governments and universities declines, costs rise, especially when the archaeology is underwater.”¹⁸ A recent excavation in the harbor of Alexandria, Egypt, was sponsored in part by the Discovery Channel. It used such recent advances in technology as the lighting system used for underwater scenes in the movie *Titanic*. But such sponsorship rests on the assumption that the public is willing to buy this type of video programming in sufficient quantity. And while public interest in archaeology is at record levels, this interest is not without controversy. Archaeologists are constantly forced to answer what Bahn called “the predictable claim that archaeologists are nothing more than grave robbers.”¹⁹

The Problem of Looting

Popular interest in archaeological and cultural artifacts has spurred looting of artifacts. Once significant artifacts have been discovered, Bahn explained, “The choice is simple: Either we excavate and protect it, or we abandon it to looting.”²⁰ Archaeologists who are usually employed by universities or governments and who rely on public funding often are financially unable to keep up with the speed and resources of looters.

According to one estimate, the trade in antiquities that have been obtained and sold

illegally is valued at more than \$1 billion per year, second only in value to the trafficking of illegal drugs.²¹ “The damage in many parts of the world is so serious today that it is no exaggeration to predict that there will be no undisturbed archaeological sites in many places within a generation,”²² said Brian Fagan, professor of archaeology at the University of California in Santa Barbara.

Looting poses two primary problems for the scientific study of archaeology. First, many artifacts not deemed commercially valuable are destroyed in the looter’s rush to obtain the most financially attractive pieces. Second, even the artifacts that are not destroyed in the looting process are generally much less valuable to archaeologists than they would be if they had been excavated properly. When objects are hastily removed, their context is lost. Only when discovered and recorded within their proper context can archaeological artifacts yield the most information to professionals. This is why archaeologists go to such great lengths to carefully record information as they excavate a site, layer by layer.

The pace of looting has led many countries to enact strict regulations regarding the excavation and sale of cultural artifacts. These regulations fall into three major categories.

1. The first, and least restrictive, is selective controls on exports. While many objects are allowed to leave a country, the most valuable are retained. This type of regulation can be found in Canada and Japan.
2. The second type of regulation involves the total prohibition of exports of cultural artifacts, which is a preferred method of control in Mediterranean countries.
3. Third, some countries go even further by declaring all cultural artifacts the property of the state whether discovered or not. “For example, an archaeological site

in the jungle of Campeche or Quintana Roo is considered to be owned by the Mexican government even if it has not been discovered, mapped, or excavated,” said Ellen Herscher of the American Association of Museums.²³

Nepal has banned archaeological excavations almost entirely. The Kathmandu Valley may be home to unimaginably rich buried treasures, since the local population used to bury their valuables during repeated invasions over the centuries. But the fear that such treasures will be looted and sold abroad has led the government to conclude that they should not be discovered. “If we cannot provide such security, it might be a good idea not to encourage such excavation work: our treasures may be safest under 20 feet of earth,” said the government’s newspaper.²⁴

The countries that have taken strong measures to avoid the exportation of archaeological artifacts from their borders are increasingly assertive in trying to obtain those that were taken in the past. In one recent case, the government of Turkey was successful in regaining the Lydian Hoard, a famous cache of coins, from the Metropolitan Museum of Art in New York. Less successfully, Greece has tried repeatedly through diplomatic channels to obtain the return of the Elgin Marbles from the British Museum in London. These sections of the Parthenon frieze were taken from Greece in 1806 by Thomas Bruce, seventh Earl of Elgin. The Greek government claims that they represent an irreplaceable part of Greek culture and should be returned. But those who advocate keeping the Elgin Marbles in London point out that, thanks to the painstaking care of the British Museum, this section of the Parthenon frieze is in much better shape than what is left in Athens.

Economic Growth and Archaeology: A Blessing or Curse?

Even if governments could eliminate looting, archaeology would still face a great threat from the destruction of artifacts and sites by economic activities such as construction and agriculture.

Construction has become a major factor in the destruction of archaeological artifacts for one important reason: The places in which people live and work now are, in many cases, the same places people have occupied for thousands of years. Such is the case of the mouth of the Miami River where the Circle was discovered. Therefore, when a construction project is undertaken in cities that have long histories—London, Tokyo, or Rome, for example—developers will most likely encounter archaeological artifacts from cemeteries to ancient buildings.

In the United States, construction projects routinely encounter the remains of American Indian settlements. As a result, various laws have been developed to protect important finds. Federal law requires archaeological surveys to be conducted when potentially important finds are encountered on federal land or during construction projects financed by the federal government. The laws are also designed to curb looting on federal land or Indian reservations. The penalty for violating the looting prohibition can include prison time and financial penalties. At the state level, most laws focus on how to deal with archaeological sites where human remains are discovered. In such cases, professional intervention is usually required.

On private land, where the majority of archaeological artifacts are found, there are relatively few regulations regarding their handling. Those that do exist are generally local ordinances such as the ones in Miami.

Miami was one of the first local jurisdic-

tions to place regulations on private landowners dealing with the treatment of archaeological finds. In the early 1980s, Miami-Dade County enacted Chapter 16A and the City of Miami enacted Chapter 23 of their respective codes, both historic preservation ordinances. Miami's code, which governs the site of the Circle, was intended to "preserve and protect the heritage of the city through the identification, evaluation, rehabilitation, adaptive use, restoration, and public awareness of Miami's historic, architectural, and archaeological resources."²⁵

The code charged the historic and environmental preservation board with the responsibility of identifying areas within the city that contained either known or potentially important historical or archaeological sites. Included in these designations were archaeological zones—areas "which may reasonably be expected to yield information on local history or prehistory based upon prehistoric or historic settlement patterns."²⁶ The law requires landowners to acquire a Certificate of Appropriateness before undertaking certain activities within archaeological zones or sites.

To obtain a certificate, the landowner or developer must submit an application detailing the site and the proposed project. Based on the application, the county archaeologist makes a recommendation on the scope of archaeological work, if any, that is needed before the certificate is to be granted. The Miami code provides that

No Certificate of Appropriateness shall be issued for new construction, excavation, tree removal, or any other ground disturbing activity until the county archaeologist has reviewed the application and made his recommendation concerning the required scope of archaeological work.²⁷

If no important archaeological find is expected on the site, the board may grant the

certificate and the construction project or other activity may resume unabated. If important artifacts are found, the board may pursue several options.

- It may require "an archaeological survey at the applicant's expense conducted by an archaeologist approved by the board containing an assessment of the significance of the archaeological site and an analysis of the impact of the proposed activity on the archaeological site."²⁸ Archaeological surveys can be obtained at a relatively low cost, usually several hundred dollars per day, from professional archaeologists. Based on the archaeological survey, the project may be approved or further measures may be required.
- The board may work with the landowner to redesign a project to better preserve an archaeological site. In some cases, building over a site may be allowed if the design is such as to preserve the underlying archaeological artifacts.
- Or the board may issue the certificate with a delay that would allow the project to continue but only after allowing more time for archaeological work.

Private and Public Archaeology

One response to the need for preservation of artifacts on private land has been the development of private archaeological conservation groups. These groups, either through purchase or negotiation with landowners, try to reach agreements that will prevent the destruction of old treasures. The Archaeological Conservancy, founded 20 years ago, is the largest such group in the nation and is modeled after a successful environmental organization, The Nature Conservancy. The Archaeological Conservancy's goal is to acquire important archaeological sites on private lands and then turn them into ar-

archaeological preserves. In many cases, it has found that landowners are willing to donate land that is considered historically important. The organization also purchases land from willing sellers, with revenue generated from its 16,000 members and private foundations.

In contrast to the local ordinances and efforts of private groups in the United States, archaeological preservation in many countries is undertaken almost entirely by professionals under the regulation of national governments. Partly due to increased regulations and government funding as well as more construction reflecting economic growth, the number of excavated archaeological artifacts has increased dramatically in recent years. In England, for example, as many as 4,000 archaeological excavations take place each year, nearly five times as many as were conducted in 1989.

This has led to a dilemma of sorts, an embarrassment of riches. “England’s archaeological archives are in crisis due to a lack of storage and display space,”²⁹ according to *The Daily Telegraph*. The Museum of London has only 10,000 items on display but more than a million more are in storage and not accessible to research. Dealing with these growing troves has become increasingly problematic.

In Japan, where centuries-old artifacts lie beneath most modern buildings, construction has also led to a rapid increase in what is known as rescue archaeology. “Processing the voluminous data cannot keep pace with its extraction from the ground, so there is a mountainous backlog of material to be published,” according to Renfrew and Bahn. “The country now has a critical shortage of storage space, exacerbated by a fivefold increase in [mostly salvage] excavations during the past 15 years [there were 8,200 in 1991, which cost 98 billion yen, about \$1

billion dollars].”³⁰

In addition to the shortage of storage space for excavated artifacts, there is also a critical shortage of documented research on explored sites and artifacts. A site or artifact that escapes the bulldozer may still be lost to human knowledge because of inadequate research and documentation. This problem will grow as the pace of construction and rescue archaeology increases. According to Renfrew and Bahn, “Up to 60 percent of modern excavations remain unpublished after 10 years, and it is reckoned that only 27 percent of the digs funded by America’s National Science Foundation since 1950 have ever reached print.”³¹

Given the problems construction can bring to archaeological preservation, it is easy to understand how many people can conclude that the two activities are incompatible. But an important connection exists between the two fields. Construction is responsible for finding several important archaeological treasures. The Miami Circle is one of the most recent examples of an archaeological find being unearthed due to construction, but this type of discovery has been occurring for centuries.

While Napoleon took more than 60 scientists to explore Egypt and to record the findings of his invasion, the most important discovery of that expedition, the Rosetta Stone, was made by an army officer during the construction of a fort.³² Such serendipitous discoveries have been crucial to the field of archaeology over the years and thus to our increased understanding of the past. To promote such an understanding, it is important that the interests of both construction, which uncovers many sites, and archaeology, which can provide the understanding of those sites, work together cooperatively and efficiently.

4. Drawbacks of the Current Approach

Archaeology today faces many challenges in its quest to provide a greater understanding of the past and, as a result, governments around the world have passed various laws and regulations. But many of these regulations have not only worsened the problems they were designed to alleviate but have also created new problems. Governments have imposed higher costs on society and have offered counterproductive incentives to landowners and others, thereby often decreasing the number of productive discoveries. The political influence in archaeology and the reliance on command-and-control methods help to generate these problems.

The Cost of Archaeological Regulation

Many supporters of the current approach to archaeological regulation believe that developers should cover the costs of rescue archaeology and other activities, since it is their actions that threaten to destroy valuable sites. However, the impact of these costs is more complicated than it seems. In many locations, including Florida, what is below the surface of private land (other than human remains) belongs to the landowner, unless subsurface resources have been sold or given by contract to others. This means that the costs affect landowners directly and developers only indirectly, and the regulations designed to place the costs on developers are generally unsuccessful in doing so.

Investment capital, unlike land, is mobile and can be moved to more valuable uses. When development costs are raised, they are shared by those who sell the land for development and the buyers (and ultimately renters) of the developed property. As a result, those who buy or rent the developed property pay more, and the value of land that remains to be developed is diminished.³³

Thus it is the owners of land, not developers, who pay for archaeological digs and development delays when such costs are regulated.

In the case of the Miami Circle, Baumann, like all other builders, knew about the costs of hiring the monitoring archaeologist, the potential for delays, and the possibility of additional research costs if interesting artifacts were unearthed during excavation. Those influences on the cost of property and the higher sale prices and rents for newly developed properties are all factored into a builder's calculations. Developments in the historic areas of Miami-Dade County must provide a return as high as other potential developments nearby or else developers will go elsewhere. Again, it is landowners with property eligible for development, together with buyers and renters of property in the areas affected by the regulation, who shoulder the burden of regulation, not developers.

Unanticipated costs paid by developers, however, are a different matter. While Baumann knew that delays were possible, he may not have anticipated the long delay involved with the eminent domain proceedings that occurred. To the extent that those costs were not reimbursed by the county and its partners in the taking of the property, he was forced to bear them. On the other hand, if development had resumed, a lawsuit by the developer might have placed the burden of the delay on the county and its taxpayers, thereby reimbursing Baumann for the unexpected costs.

The Miami Circle episode showed that when publicity and popular support for site preservation exist, it is possible under the current rules to fully compensate developers and those who finance similar projects—even those with delays and cancellations such as in the Circle case. However, uncer-

tainty remains as to possible future outcomes and this uncertainty makes development less attractive and may even slow its progress. Only optimistic developers who expect to escape new costs will proceed as before and expose themselves to the possible costs. It has yet to be determined what extent the uncertainty and the possible increased costs place on future developers and what chilling effect they will have on future development in Miami.

In addition to the unintended burden archaeological regulations place on landowners, other problems may have effects that are less obvious but at least as important on archaeological research.

Supply-Side Problems

While much of the cost involved in archaeological regulations may not be borne directly by the developer, the regulations still encourage behavior that is unproductive from an archaeological standpoint. The decreased property values experienced by landowners and the uncertainty faced by developers motivate both parties to ensure that no artifacts are found on their land. In that way, they can avoid the cost of an investigation.

Many archaeologists have failed to realize this incentive problem and, in fact, some have actually encouraged it unwittingly. According to one leading advocate of archaeological regulations:

So-called cultural properties are like environmentally endangered species. First, they are non-renewable resources: once exhausted or destroyed, they cannot be replenished or replaced. Second, they are not anyone's property and no one can properly be said to own them . . . Hence, no one has a claim to restitution or restriction based on an alleged right (for example, right of ownership) to them.³⁴

This position enjoys widespread support

among many advocates for stricter regulations.

However, research has documented the negative impact of regulations designed to protect endangered species. When landowners are forced to pay the price of protection, either directly or in terms of lost uses of land, they are motivated to ensure that they do not become the unwitting hosts of any endangered species.³⁵ The Endangered Species Act (ESA) has frequently had an impact directly opposite of what it was intended to have.

According to Michael Bean of the Environmental Defense Fund, who is often given credit for writing the Endangered Species Act, there is "increasing evidence that at least some private landowners are actively managing their land so as to avoid potential endangered species problems." People do this not out of "malice toward the environment," he said, but because of "fairly rational decisions, motivated by a desire to avoid potentially significant economic constraints." This behavior, according to Bean, is a "predictable response to the familiar perverse incentives that sometimes accompany regulatory programs, not just the endangered species program but others."³⁶ Economists are finding evidence that Bean is correct in his concern.³⁷

Many regulations have unintended consequences. As laws lean toward treating archaeological treasures like endangered species—that is, penalizing the people on whose land they appear—we should expect the results to be similar. That is, we should expect to see landowners and developers actively avoiding archaeological finds and, in fact, there is evidence that this is happening. According to one professional archaeologist, "Some builders even offer me money not to find anything."³⁸

Even after some artifacts are found, a

developer may not want to cooperate with archaeologists for fear that additional discoveries may impose further costs. In the case of the Miami Circle, the developer was reported to be very cooperative with archaeologists initially. Even though a judge denied an attempt to halt Brickell Pointe's development early on, Baumann allowed archaeologists to continue their research (albeit with restrictions) while he went forward. As described in the *Miami Herald*, "He [Baumann] has been working side-by-side with Carr's crew, clearing out the post holes, helping to get the area prepped for mapping and photographs."³⁹ According to one of his attorneys, Baumann was leading efforts to save the Miami Circle early on. "Up to now, the only person who has done anything constructive to save the Circle is the developer. Everyone talks, but no one dips into their pocketbook, other than the developer," the lawyer said.⁴⁰

But while any developer might cooperate when costs are low, he or she has an incentive to prevent such a process from dragging on and thus raising costs substantially by delaying the revenues that begin upon project completion. It is the archaeologists and society in general, rather than the developers or landowners, who ultimately gain from any new discovery under the current arrangements.⁴¹ Developers want to get the process over as quickly as possible to protect their investments. Even when compensation through the eminent domain process is possible, there is no guarantee. Given that even well-intentioned cooperation could lead to unexpected delays or even cancellation of a project, a risk-averse developer will attempt to avoid such a situation. Baumann's attorney correctly captured the predicament: "Because of the way things are happening and the way he is being treated, he is being punished for being a nice guy and a good

guy and for letting them have 50 feet. What motivation is there to let them go beyond that?"⁴²

Regulations that deny gains to landowners or developers from the sale of artifacts found on their property can also increase in the problem of looting. Without a financial interest in their preservation, landowners have very little incentive to stop the looting of artifacts, even on their own property. To prevent looting is expensive, either in terms of costly security measures, or in terms of the perceived threat from looters who may resort to intimidation to gain access to property. If, by preventing the looting, the landowners cannot profit from the artifacts they protect, then the costs clearly outweigh the benefits. As a result, they should be expected to be less willing to protect the artifacts in most cases. The problem is made worse as the regulations that penalize artifact ownership are made more stringent. If antiquities are treated in the same way as endangered species and no one is allowed to own them (as is true in many countries), then:

1. The problem will be maximized.
2. There will be no potential benefit to the landowner or developer from protection.
3. All costs undertaken to preserve artifacts will be a net loss to the landowners.

The Chilling Effect

Current archaeological regulations can also lead to a "chilling effect" on development and economic growth. How large is this effect? It is often hard to weigh because its costs, such as decreased economic growth and lost future development, are not easily observable.

But in the case of the Miami Circle, one thing is easily estimated: the cost the city must pay in forgone tax revenue from the cancellation of the Brickell Pointe develop-

ment. According to estimates published in the *Miami Herald*,⁴³ the project could have been worth approximately \$90 million when completed. (Estimates from Baumann's attorneys put the value of the project closer to \$126 million.) This would have led to tax revenues of about \$1.1 million per year for the city, \$647,000 for the Miami-Dade County government, and more than \$900,000 for the Miami-Dade County school district.

While the advocates of archaeological preservation often say that "you cannot put a price on the past," it is important to consider the cost before deciding to allow a construction project to continue. While many believe the government should be responsible to preserve archaeological finds, it clearly is also responsible to provide services such as education and law enforcement. Given its limited resources, all the costs should be considered when making such decisions. As Mayor Carollo pointed out, "I have the responsibility to do what is right for past civilizations. But I have a greater responsibility to the present civilization."⁴⁴

While the loss of revenues from the Brickell Pointe development may be large, some, including Carollo, expressed concerns that other even more valuable projects will be lost. To the extent that Miami is perceived as a risky place because of strict archaeological regulations, developers may look for alternative sites that are less likely to contain artifacts and not subject to regulations. This could lead to further financial losses for the governments that enact the regulations.

A proposed \$1 billion multi-use development, One Miami Center, has featured prominently in discussions of the long-term effect of the Miami Circle conflict. The site is across the river from the Circle and could contain even more valuable artifacts, accord-

ing to county archaeologist Ricisak. An attorney for the project implied a chilling effect when the *Miami Herald* was told that the potential developers would "be watching how this [the Miami Circle] is handled. I wouldn't say the project is in grave jeopardy, but it clearly gives a developer a pause. We understand that the issue is there."⁴⁵

The loss of millions of dollars in tax revenue when projects such as One Miami Center are delayed or canceled include part of the true cost to taxpayers of archaeological preservation under current laws. Failing to take those costs into account will invite inefficiencies and inequities as public decisions are made.

While these costs come primarily in terms of lost economic opportunities, the chilling effect could also lead to losses in terms of archaeological discoveries. Lack of funding is a major problem in the field. Hershel Shanks, publisher of two leading archaeology magazines, says that "archaeologists are, as a group, poor as church mice."⁴⁶ But they have often benefited from the assistance of developers who are potentially wealthy. Construction threatens archaeology by destroying potential sites and simultaneously uncovering sites that might otherwise remain unknown. By potentially discouraging construction in areas that may be archaeologically rich, regulations thus have the unintended side effect of precluding important discoveries.⁴⁷ Solving these problems and opening the door to greater opportunities for archaeological work while minimizing the cost of doing so is a worthy goal indeed.

Political versus Voluntary Solutions

Politicians are often forced to be more concerned with the impact of their decisions on election day than on results over the longer-term future. Frequently, decisions

that harm the public over time result. An equally poor track record is apparent in governmental decisions on scientific issues that are made politically, rather than by specialists and investors with their own wealth at stake.⁴⁸ Even among highly respected national governments, failures abound. Two examples are the Japanese government's decision to promote development of the fifth-generation supercomputer instead of the personal computer, and the U.S. government's promotion of ethanol research. These failures occurred because political decisions are seldom made by weighing the scientific costs and benefits.

In the field of archaeology, decision-making processes are further complicated by the sensitive nature of issues involving ethnic or religious differences and the perceived injustices of previous generations. As Renfrew and Bahn point out, "Archaeology has become a focal point for complaints about the wrongdoing of the past."⁴⁹ This issue plays a central role in the debate of the return of cultural artifacts like the Elgin Marbles, which were removed from Greece while it was under the rule of an occupying power. In testimony before the state cabinet, one American Indian declared that "if no one took on the responsibility to save this [Miami] Circle and the Circle was destroyed, it would be the same as a statement that we are destroying life here on earth with development." In a situation where such claims are stated and accepted, cultural understanding is likely to take a backseat to political calculations. Not wanting to be seen on the wrong side of the debate, State Agricultural Commissioner Bob Crawford proclaimed, "I like Indians." Concerns over the authenticity of the site, including Attorney General Butterworth's comment that the Circle may turn out to be a septic tank, did not stop the state or county government from pledging

millions of dollars for the purchase.

While research since that time has led to more evidence that the site is of ancient origin, there are still reasons to doubt the political system's ability to decide which budget allocations would save key archaeological sites most effectively. Politicians strive to please, or at least to not offend, voters. Yet voters know very little about the case, the cultural values at stake, or about the value to the larger archaeological picture. Nor do they have any idea of how this and other sites might compare in value or how that value might compare to the hospital, school, or other public goods that may be sacrificed if tens of millions of dollars are spent here.

Compare that politician's dilemma with the decision facing the Archaeological Conservancy or even a consortium of such groups that might seek to privately secure and investigate the site, perhaps to sell some of the artifacts later after they have been properly recorded and researched. In the latter case, the important constituents as potential donors will know far more about the relevant tradeoffs. Such a private group is likely to err less often because of its need and its ability to deal with knowledgeable, even passionate, people who sacrifice to finance the work. Organizations that have made sound decisions and few errors will recruit alert donors from competing groups.

Consider also government's penchant for short-term solutions. The purchase of the Miami Circle probably does not improve the ability of archaeologists (or others) to better preserve future important discoveries. The decision to preserve the Circle was made politically rather than voluntarily by those who will pay. At the same time, the county government insisted on an all-or-nothing solution rather than rescue archaeology. As a result, the cost may have been much higher

than it otherwise would have been. While everyone agrees that saving all-important historic and prehistoric sites would generate benefits, limited resources dictate trade-offs, even in a relatively wealthy place like Miami. Other issues such as education and law enforcement compete for the same budget revenue.

Agreeing to spend \$26 million to preserve this site has done nothing to secure the preservation of future discoveries. What will happen, politically or otherwise, the next time an important site is discovered? No one knows.

The state failed to adopt a “look before you leap” policy that would have required questions about the site’s authenticity and importance to be answered before a purchase was agreed to. If the site proved to be inauthentic, public support for archaeological funding could be severely curtailed. While archaeology currently enjoys high public interest, that enthusiasm could be dampened if the public views such decisions as mere bowing to political pressure groups rather than a legitimate historic preservation effort. As long as decisions over archaeological preservation continue to be made in the political arena, we should expect political considerations to dominate, rather than primarily scientific or historical considerations.

5. A Better Way: Improved Institutional Arrangements in Archaeology

The Miami Circle episode illustrates some of the problems that engulf archaeology today. One problem is a reliance on regulations that may discourage those who find artifacts from preserving them in the future. Another is the lack of sufficient funds to ensure that future archaeological finds will be preserved. Finally, a continuing problem is

looting, which both damages archaeological sites and distributes artifacts bereft of knowledge about their context and history.

Many archaeologists believe that the market for artifacts is the enemy of archaeology, as indicated by the code of ethics quoted earlier. In a sense, the market is an enemy today. Archaeological sites and artifacts are not protected and are not made valuable to landowners by property rights that are secure and easily defended. In addition, the market for artifacts today is conducted without the participation of careful archaeologists. However, the artifacts market that today causes problems for good archaeology could become its greatest booster.

Using Market Incentives to Preserve Natural Resources

The idea of using markets to preserve natural resources, including wildlife, is not unusual. Mounting evidence is showing that markets perform this task quite well.⁵⁰

One example is the CAMPFIRE program in Zimbabwe, which allows local villages to profit from the preservation of elephant herds and other wild animals. This program has shown that markets can be a key part of the drive to sustain their populations.

Prior to the program inception, villagers found it difficult to protect their crops, homes, and sometimes their lives and viewed wild elephants as dangerous competitors. They often killed the animals and poaching was rampant, as villagers ignored and sometimes even helped poachers. Under the CAMPFIRE program, local communities are allowed to profit from fee hunting and recreation programs that involve the elephants. The fees generated by hunting expeditions (\$12,000 or more for a single elephant) are a financial boon to a village where the average income per family of

eight is about \$150 per year. Even with this hunting, elephant populations are increasing because the financial incentives the villages receive ensure that adequate numbers of animals are preserved for the future. They resist the temptation to allow over-hunting and poaching because they want to have adequate numbers of elephants to profit from future hunts. Today, villagers view the elephants as beneficial and the poachers as competitors. Since the program's introduction, poaching has decreased and villagers have become the protectors of elephants and other species.

This change in incentives has had dramatic results. From 1989 to 1995, elephant populations in Zimbabwe grew by 14 percent while in much of the rest of Africa, where traditional regulations were relied on, the herds decreased by 24 percent.⁵¹ Once the value of elephants to society was not only recognized but also shared with those who were most closely involved with them, the animals' value increased. Those from whom stewardship and sacrifice were asked were given an ownership stake in return. As normally happens in markets with property rights, the fruits of their stewardship increased and were shared with buyers from the general public—those who paid for access to the elephants through tourism, photo opportunities, and hunting experiences. Today, there is a saying in Africa about wildlife there: "If it pays, it stays."

The Zimbabwe experience is not an isolated instance. A report by the President's Council on Environmental Quality⁵² and a book, *Enviro-Capitalists: Doing Good While Doing Well*,⁵³ cite numerous examples of private organizations, both nonprofit and profit-making, that protect the environment privately using the tools of the marketplace.

Using Markets for Archaeological Preservation

The market institutions and incentives that help preserve elephant populations in Zimbabwe can also encourage the preservation and study of archaeological artifacts. The two primary changes needed to reap these benefits are: 1) to give private landowners clear and transferable property rights to the artifacts found on their land, and 2) to allow for the free import, export, and sale of legally owned artifacts so that an open market can develop.

This would be a dramatic change from the status quo. Current regulations in many countries, together with the currently prevailing anti-market code of ethics in archaeology, discourage the preservation of artifacts. This command-and-control approach imposes costs on landowners, developers, and those who would later benefit from using the developed sites. It also fails to reward the best stewards, to reward added cooperation from landowners and developers, and to gain more support from enthusiastic followers of archaeology. If landowners were encouraged to contract with archaeologists to explore and develop promising sites, far more value would be produced and potentially valuable sites would be zealously protected against looters and "pot hunters" who disturb sites and ruin them for serious study. In contrast, today's approach of seizing control over excavation and over the artifacts found does the opposite—it removes the incentives to preserve, research, and thus add market value to artifacts. Good intentions are not enough. Good results will require better methods.

A proper market in artifacts would produce more revenue than even today's market does, which is understandably shunned by archaeologists. The prospect of sharing in

that revenue would encourage both landowners and developers to recognize the value of archaeological resources that might be discovered on their land, thus encouraging conservation and proper development. A fully researched artifact is worth far more, because with it comes the fullest story that can be told about its context and history.

Landowners with clear and secure property rights to artifacts discovered on their land and with the knowledge that a market for properly researched and recorded artifacts exists, would be motivated to seek skilled archaeological help in finding and developing additional value from the artifacts. The antiquities would then find their way to those museums or collectors who valued them, much as the market for paintings of the masters or the market for antiques works today. More artifacts would be preserved and fewer of those that are discovered would be unused and stored in costly warehouses.

Just as the CAMPFIRE program in Zimbabwe has made wildlife the friend rather than enemy of local villagers, proper reform could make archaeological finds a benefit to landowners and developers rather than a burden. Archaeologists would be seen by those who own or control promising sites, including those about to be developed for other land uses, as the discoverers and creators of value that they really are.

We could expect contractual arrangements between archaeological groups and landowners to develop to explore prospective archaeological sites, just as they have developed between landowners and petroleum exploration companies. The contracts would specify up-front payments or bonuses, if any, together with agreements about the timing and time allowed for excavating and documenting sites and its artifacts, prior to preparing articles for sale, and also royalties

or the sharing of any resulting revenues. Some would yield little in the way of marketable artifacts, just as many drilling operations fail to turn up marketable petroleum reserves. But drilling often produces valuable information about the local area even when no marketable petroleum is found. Similarly, archaeological exploration may produce valuable knowledge from a site even when no artifacts with market value are found. Expectations of a find give landowners an incentive to protect potential sites and to cooperate in their development.

As rewards grow for better archaeology, the demand for better archaeological science will grow, too. In this (proposed) market as in others, we should expect that reputation matters and will be rewarded. Archaeologists, some of whom may be affiliated with specific museums, would be rewarded in the market for good track records in archaeology. An artifact marketed with a history developed by a reputable firm, especially one affiliated with a reputable museum, is worth more to collectors.

Such an artifact would also increase public support of archaeology. As more are discovered, prices would decline for the most plentiful items, even as their value was enhanced by the accompanying certificates of legitimacy and explanations of context and interpretations of their historical significance. The increased flow of value would encourage and enable more people to become collectors. In addition, public support would be fostered by the cooperative nature of the value-producing voluntary market in artifacts. When cooperation with archaeologists is voluntary, as well as potentially rewarding, archaeologists should be appreciated, not resented. In contrast, the current political control has led to contentious debates such as the one over the fate of the Miami Circle. Minimizing the role of politi-

cal decision making and involuntary seizure of rights would give archaeology a more favorable image.

Preventing Looting

One major problem is the indifference to looting on the part of owners who could, at a cost, prevent it. The current regulatory regime is failing. According to Hershel Shanks, a prominent critic of the current approach, “Campaigns to put antiquities dealers out of business and to discourage private ownership by vilifying collectors have not had any significant effect on looting.”⁵⁴ A market for properly researched artifacts, complete with descriptions of the context and importance of the objects, however, should reduce this problem. Looted artifacts should become much less valuable. Currently, plundered artifacts are the only ones available to collectors in many countries and regions because of tight restrictions on the movement and sale of legitimate finds. Indeed, in some places professional archaeologists cannot gain access to legitimate artifacts because restrictive policies have discouraged their collection and discovery. In those countries, better access for archaeologists and better protection for sites could be greatly aided by use of markets for artifacts.⁵⁵

Shanks has argued that market system would decrease looting because looters could be gainfully employed in far more productive archaeology. Today, looting provides a profitable escape from traditional methods of employment such as farming. “Why not employ them [looters] to do the same thing they are doing, but under the supervision of archaeologists?”⁵⁶ Shanks asks. Much of the problem now is that pot hunters rapidly rummage through sites, destroying much of a find’s valuable contextual information. Working under archaeolo-

gists’ supervision, looters could be taught proper technique and thereby preserve much of the understanding of the past that is currently being destroyed.

Archaeologists could gain additional funding for their excavations and research by selling many of the artifacts of which museums and government warehouses have numerous duplicates, sometimes a thousand times over. As Shanks tells it, “It is not simply that they (duplicate artifacts) are not needed. Worse, they cannot be stored; there is no longer any space in government and museum stores to house and conserve them in a way that would make them available to scholars. It would be better to enter appropriate records into a computer, to photograph the objects, and then to sell them.”⁵⁷ Shanks prefers to give first choice in any sale to public institutions, but this would be not necessary to ensure proper research or public display.

Ensuring Diversity in Archaeology

Finally, a market in properly researched artifacts would preserve a broad spectrum of archaeological artifacts. The debate over the fate of the Miami Circle, much like the debate about archaeological preservation in the rest of the world, has been characterized by charges of one culture dominating or destroying the history of others. But by their very nature, markets provide a solution to this problem, one that governments’ efforts have often failed to address successfully.

Bringing collectors, hobbyists, amateurs, professionals, and museums into market cooperation would allow a wide variety of views and values to be reflected. While some collectors may only be interested in Egyptian artifacts, others may value Roman or Greek relics, and others may want artifacts of American Indian origin preserved. When preservation decisions are made in the

political arena, with its “majority rules” mentality, diverse views often are poorly represented. Markets, in contrast, cater to individual tastes and preferences in all their diversity. Small niche markets can develop that would never be supported by a majority of those interested. Allowing a market in archaeological artifacts to develop would increase the diversity of artifacts that are preserved and studied.

Developing a Registry of Artifacts

As their knowledge of the past and their scientific tools improve, archaeologists sometimes revisit the trove of artifacts from a given site to learn more from them and perhaps to reinterpret them. If the artifacts are scattered, how would this occur? One feature of markets is that secure property rights in valuable and unique assets are usually registered and frequently insured against theft or destruction as well. So it would be natural to develop such a registry for valuable pieces. Insurers might demand it and owners would cooperate to gain and preserve clear, transferable, and insurable titles. And when an artifact is first sold, after being studied and recorded, the sale could include a contractual stipulation that temporary return for further study could be demanded by the archaeologist or firm selling it. Most collectors would prefer artifacts thought to be unique and important enough to be subject to such a stipulation. And their desire for clear and transferable title and insurability would encourage buyers and sellers to keep the registry current if the artifact is sold. It would be far better that collectors, while enjoying the artifacts, should also pay for their storage and safe-keeping of the vast troves of historic treasures, rather than having archaeologists or museums bear those costs.

6. Conclusion

The discovery in 1998 of an ancient American Indian formation in downtown Miami sparked a debate about modern society’s ability to preserve and appreciate past cultures and their history. After a long and often contentious year of political and legal wrangling that was publicized worldwide, the Miami Circle was purchased with state and county funds in the amount of \$26.7 million.

But the government’s purchase, made in the context of eminent domain proceedings, has done little to clarify how future archaeological finds will be preserved. In fact, the high price of the current deal raises questions about how frequently it will be politically feasible to preserve future finds this way. And the question of how to go about archaeological preservation is not limited to Miami or to Florida.

Around the world, as populations and economies grow, people increasingly come into contact with remnants of past cultures and civilizations. Many potentially important sites are lost regularly to construction. Agriculture and the natural elements also take a toll. The problems of preservation are further exacerbated by a lack of funding for archaeological research and by rampant looting, which destroys sites to meet the increasing demand of international collectors.

Most nations have developed laws and regulations to prevent the destruction of the historical record from construction or looting. These have generally failed to curb looting and have put pressure on the limited resources of archaeologists who try in vain to stay ahead of the farmers, developers, plunderers and the forces of nature. These regulations, together with a code of ethics that strongly discourages archaeologists from marketing properly researched artifacts, often have unintended side effects.

They encourage the hiding or even the destruction of artifacts by builders and others who see them as a burden; they discourage landowners and developers from cooperating with archaeologists; and they contribute to the demand for looted artifacts by reducing the supply of legitimate artifacts.

To remedy these problems, an approach to preservation that relies on markets and the incentive to find, enhance, and share in markets can supplement or even replace regulatory dictates. Similar approaches are helping to protect natural resources and wildlife, such as elephant herds in Zimbabwe. Granting clear and defensible property rights in artifacts to landowners and allowing an open international market to develop to trade properly researched and well-marketed artifacts could help ensure that more artifacts are found and preserved, at a greater number of more diverse sites. Doing so could also ensure that looters and other destructive forces could threaten and disturb fewer archaeological sites.

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Endnotes

1. Merzer, Martin, "Archaeologists Sift Stunning Evidence of Ancient Culture," *Miami Herald*, January 3, 1999.
2. Milanich, Jerald T., *Florida's Indians: From Ancient Times to the Present*, (Gainesville, Fla.: University Press of Florida, 1998), p. 123.
3. Ibid.
4. Whoriskey, Peter, "The Holes, the Eye, the Axes: Mysteries May Go Unsolved," *Miami Herald*, February 14, 1999.
5. Chardy, Alfonso, "Penelas Suggests Buying Circle Site," *Miami Herald*, February 6, 1999.
6. The state cabinet is composed of seven members; the governor, the secretary of state, the attorney general, the comptroller, the insurance commissioner, the agriculture commissioner, and the education commissioner.
7. Bridges, Tyler, "Miami Circle Given Priority for State Purchase," *Miami Herald*, May 26, 1999.
8. Bousquet, Steve, "State's Cost Rise in Deal for Circle," *Miami Herald*, September 29, 1999.
9. Ibid.
10. Milanich, Jerald T., "Much Ado About a Circle," *Archaeology*, September/October 1999.
11. Fienrock, Don, "Commissioners Rip Tribes for Not Funding Circle Deal," *Miami Herald*, October 2, 1999.
12. Whoriskey, Peter, "County Wins Right to Buy Circle from Developer," *Miami Herald*, June 29, 1999.
13. Renfrew, Colin and Paul Bahn, *Archaeology: Theories, Methods and Practice*, (London: Thames and Hudson, Ltd., 1996) p. 509.
14. Ibid., p. 19.
15. "Rock of Ages," *Archaeology Odyssey*, September/October 1999.
16. Oyer, Harvey E., memorandum to the authors, August 10, 1999.
17. Renfrew and Bahn, p. 523.
18. Fay, Stephen, "Cleopatra Lives," *Conde Nast Traveler*, May 1999.
19. Bahn, Paul G., "Digging Up the Past—without Recriminations," *Wall Street Journal*, September 7, 1999.
20. Ibid.
21. Nafziger, James, "International Penal Aspects of Protecting Cultural Property," *The International Lawyer*, Vol. 19, No. 3, 1985, pp. 835-852.
22. Fagan, Brian, *The Ethics of Collecting Cultural Property*, Phyllis Mauch Messenger, ed., (Albuquerque: University of New Mexico Press, 1989), p. xvi.
23. Herscher, Ellen, "International Control Efforts: Are There Any Good Solutions?" *The Ethics of Collecting Cultural Property*, 1989, p. 118.
24. Sason, David, "Considering the Perspective of the Victim: The Antiquities of Nepal," *The Ethics of Collecting Cultural Property*, p. 69.
25. Miami Code Section 23-1.
26. Miami Code Section 23-2.
27. Miami Code Section 23-5.
28. Miami Code Section 23-5.
29. Behan, Rosemary, "Ancient Artifacts Buried in Archives," *The Daily Telegraph*, July 22, 1998.
30. Renfrew and Bahn, p. 526.
31. Ibid., p. 535.

32. "Rock of Ages," p. 12.
33. As a side effect, owners of already developed properties experience increased wealth as rental and sale prices rise. Buyers and renters of such properties see their costs of living or of doing business rise.
34. Warren, Karen J., "A Philosophical Perspective on the Ethics of Collecting Cultural Properties Issues," *The Ethics of Collecting Cultural Property*, 1989, p. 19.
35. Stroup, Richard L., "The Endangered Species Act: Making Innocent Species the Enemy," Policy Series Number 3, Political Economy Research Center. April 1995.
36. Ibid.
37. Stroup, Richard L., "The Economics of Compensating Property Owners," *Contemporary Economic Policy*, Vol. 15, Oct. 1997, pp. 55-65. See also Lueck, Dean, and Jeffrey Michael, "Pre-emptive Habitat Destruction under the Endangered Species Act," PERC Working Paper (WP 99-1).
38. Nancy Marie White cited in "Ancient treasures lost and found," *Tampa Tribune*, March 14, 1999.
39. Ancrum, Nancy, "Miami Circle Mysteries Pose Dilemma for Developer," *Miami Herald*, February 4, 1999.
40. Garcia-Toledo cited in Merzer, Martin and Alfonso Chardy, "Developer Gets Tough: No Further Delays, Officials Are Told," *Miami Herald*, February 10, 1999.
41. The general public will probably benefit from any new discovery based on potential new historical or scientific knowledge that may be produced. This does not necessarily alter the decision-making process of the developer who is still facing financial incentives to expedite the process.
42. Merzer and Chardy, op. cit.
43. Chardy, Alfonso and Don Finefrock, "It's History vs. Taxes," *Miami Herald*, February 5, 1999.
44. Whoriskey, Peter, "Price Will Be an Issue if Land Is Seized," *Miami Herald*, February 16, 1999.
45. _____, "How To Grow Downtown and Respect Past?" *Miami Herald*, February 18, 1999.
46. Shanks, Hershel, "The Great MFA Exposé," *Archaeology Odyssey*, May/June 1999, p. 23.
47. Archaeologists involved with the preservation of the Miami Circle have expressed to the authors their doubt that the controversy surrounding the discovery has resulted in a chilling effect on cooperation. They pointed out that more developers have been coming forward with questions about how to handle archaeological finds. That increased concern about knowing the rules, however, may simply reflect increased awareness of the bind they are in. Developers eager to cooperate would seek such information, but so also would those seeking simply to minimize their costs. We are inclined to expect cost concerns to be high on the priority list of a profit-seeking developer. A measure to decrease their cost should automatically act to increase their cooperation. Similarly, a market to increase their return for recovered artifact should also increase their eagerness to cooperate with archaeologists.
48. See Kealey, Terence, *The Economic Laws of Scientific Research* (London: MacMillan Press LTD), 1996.
49. Renfrew and Bahn, p. 516.
50. Anderson, Terry L. and Donald R. Leal, *Free Market Environmentalism*, (San Francisco: Pacific Research Institute), 1991.
51. Anderson, Terry L. and J. Bishop Grewell, Forthcoming. "Property Rights Solutions for the Global Commons from the Bottom-up or the Top-down?" *The Duke Environmental Law and Policy Forum*, Duke University, Durham, N.C. April 2000.
52. Council on Environmental Quality, *Fifteenth Annual Report* (Washington D.C., 1984), pp. 362-429.
53. Terry L. Anderson and Donald R. Leal, *Enviro-Capitalists: Doing Good While Doing Well*, (Lanham, Md.: Rowman & Littlefield, Publishers, 1997).
54. Shanks, Hershel, "Let's Do What We Can! The Impossible Will Take Forever," *Archaeology Odyssey*, November/December 1999.
55. Some countries may wish to restrict the market by giving regulatory powers to cultural ministries. For example, key artifacts might be studied properly but might never be allowed to leave the country, while only duplicate or less important pieces were marketed to help pay for the added protection and additional archaeological efforts there. While this approach would not enjoy all the benefits of an unrestricted market, it may be a more politically viable alternative given the severe distrust of markets by many in the archaeological community.
56. Shanks, Hershel, "How to Stop Looting: A Modest Proposal," *Archaeology Odyssey*, September/October 1999.
57. Ibid.