

SPECIAL FORUM: ARCHAEOLOGY IN THE NEWS THROUGH TIME

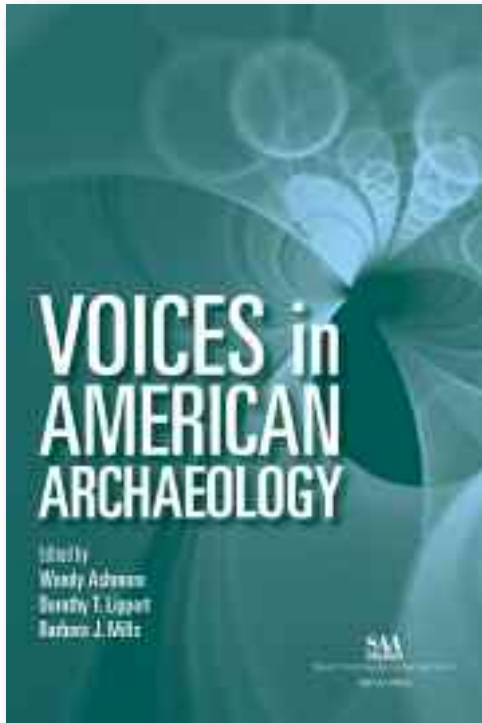
# the **SAA** archaeological record

NOVEMBER 2010 • VOLUME 10 • NUMBER 5



SOCIETY FOR AMERICAN ARCHAEOLOGY

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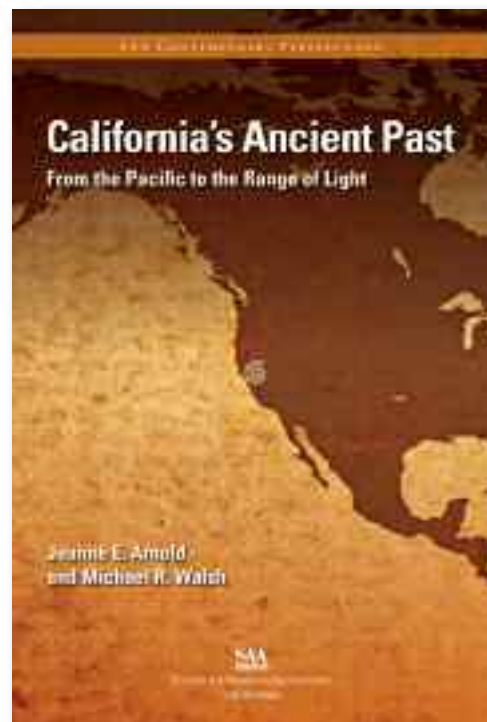
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# the SAA Archaeological record

*The Magazine of the Society for American Archaeology*

**VOLUME 10, No. 5**

**NOVEMBER 2010**

Editor's Corner	2	Jane Eva Baxter
In Brief	3	Tobi A. Brimsek
Annual Meeting: Welcome to Sacramento	4	Jennifer Perry
Annual Meeting: Sacramento in 2011	5	Sannie Kenton Osborn, Dana McGowan, and Susan Stratton
Volunteer Profile	6	Gordon Rakita
Dry Dig—Ethics and Alcohol in Middle Eastern Archaeological Practice	7	Benjamin W. Porter
Open Context in Context: Cyberinfrastructure and Distributed Approaches to Publish and Preserve Archaeological Data	12	Eric C. Kansa
Is There Reliability and Validity in Portable X-Ray Fluorescence Spectrometry (PXRF)?	17	M. Steven Shackley

## **SPECIAL FORUM: ARCHAEOLOGY IN THE NEWS THROUGH TIME**

**Guest Editor: A'ndrea Messer**

Archaeology in the Swinging 50s: As Seen in the Pages of <i>Life</i> Magazine	21	Jon Czaplicki
Archaeology in the Age of Aquarius: Media Coverage in the 60s	23	A'ndrea Messer
The Impact of Koster Site Media Relations on Press Coverage of Other Archaeological Projects	27	Renata B. Wolyneć
Archaeology and the Media in the 1980s	30	Rachel Most
Archaeology and the Media in the 1990s	32	Johna Hutira
Media Relations: A New Millennium	35	Shereen Lerner
The Future of Archaeology: A Media Prophecy	38	Zachary Nelson
Financial Statements	40	
Positions Open	42	
Calendar	44	



*On the Cover: A view of contemporary Dhiban, Jordan, looking east from the ancient site. The collapsed barrel vaulted building in the foreground was likely constructed sometime after the thirteenth century CE. Photo taken in 2004 by Jamie Porter.*





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## EDITOR'S CORNER

Jane Eva Baxter

*Jane Eva Baxter is the editor of The SAA Archaeological Record.*

It may just be the “honeymoon,” but I am finding the position of editor to be a good deal of fun. The SAA membership is proving to be as diverse in its interests, opinions, and ideas as one might expect, and it is a genuine privilege to be in a position to learn of this diversity firsthand and to find ways to share it with the readers of *The SAA Archaeological Record*. I have also been inspired working with authors, who nearly without exception have been courteous and collegial and genuinely interested in making *The SAA Archaeological Record* an outstanding publication for the readership.

This month features a forum by the SAA Media Relations Committee entitled Archaeology in the News through Time, edited by special guest editor A'ndrea Messer who worked arduously to bring these contributions together. In the last Editor's Corner, I mentioned it was my intention to work with the Committees and Interest Groups of the SAA to develop forums that would be of interest to the membership and to help connect the membership to the volunteer organization of the SAA. This forum is a great starting place. The articles feature a selected history of media relations over time from the 1950s to the imagined future and are based on a poster session sponsored by the Media Relations Committee from the recent SAA meeting in St. Louis.

I want to once again approach you all with some requests. First, you'll notice that the November Issue has our first Volunteer Profile. This column was created by the Board of Directors at the most recent Annual Meeting, and is designed to introduce SAA volunteers to the broader membership. If there is a SAA volunteer you'd like to see featured in this column, please do let me know. I also want to make a plea for people to send in photos that would be suitable cover art for *The SAA Archaeological Record*. When I took on the job as editor, I had no idea the most difficult part would be to find images suitable for the cover. It is. So, if you have original images that are oriented vertically, at least 300 dpi and 9" wide, and that are archaeological in nature please feel free to send them along. I'd be pleased to consider them for a cover of an upcoming issue. Finally, this issue features information about our upcoming meetings in Sacramento. If you are presenting a paper or poster or organizing a session for the meeting and you feel the content may have broad disciplinary appeal, consider contacting me about publication possibilities in *The SAA Archaeological Record*.

In last month's issue, I gave an email address to you all that for various and sundry reasons known only to the IT division of my institution, is not working properly. The idea for such an address was to make it easier for my editorial assistant (Michael Marshall from the September cover photo) and I to both access correspondence with ease. Apparently it is not to be. I do indeed apologize for this, and encourage you to use my individual email account: jbxter@depaul.edu to contact me with submissions, queries, and letters to the editor. There is abundant proof on daily basis that this email address works quite well. Please do keep in touch.

# IN BRIEF

**Tobi A. Brimsek**

*Tobi A. Brimsek is executive director for the Society for American Archaeology.*

## SAA Needs Assessment Survey is Out

On October 13, 2010, Association Research, an independent third party, launched SAA's second-ever needs assessment survey to our current members. An email from [saasurvey@associationresearch.com](mailto:saasurvey@associationresearch.com) was sent with the link to the web-based survey. We hope that you will be willing to share your thoughts with the Society. Completion of the survey will take about 20–30 minutes. SAA needs your input! If you are a current member and did not get the survey, you can contact the research firm directly at [ari@associationresearch.com](mailto:ari@associationresearch.com). We sincerely want to hear from you. Thank you in advance for taking the time. The deadline for completed surveys is December 1, 2010.

## SAA 2011 Ballot

The 2011 SAA ballot link will be sent to all members during the first week in January via email. If the Society does not have your email address, or if the email bounces back, a postcard with instructions on how to access ballot material will be mailed. In addition to the 2011 slates, there will also be a proposed Bylaws amendment for your consideration.

To help ensure the efficiency of the web-based balloting system, please remember to update your email address in the Member's section of SAAweb ([www.saa.org](http://www.saa.org)) or by emailing your updated/current email address to the SAA staff at [membership@saa.org](mailto:membership@saa.org).

Most importantly, please make sure that the ballot email from [elections@vote-now.com](mailto:elections@vote-now.com) makes it through your spam filters!

## Have You Made Your Reservations Yet?

Reservations are available for the 76<sup>th</sup> Annual Meeting in Sacramento, California, March 30–April 3, 2011. SAA will be using the Sheraton Grand Sacramento (co-headquarters hotel), Hyatt Regency Sacramento (co-headquarters hotel), Clarion Hotel Mansion Inn (student property), Holiday Inn Express Sacramento Convention Center (student property), and Best Western Sutter House (overflow and student property).

Of course, the Sacramento Convention Center will be used for

sessions. Auxiliary meetings will be scheduled for either the Hyatt or Sheraton.

## Co-Headquarters Hotel Information:

Sheraton Grand Sacramento	Hyatt Regency Sacramento
1230 J St.	1209 L St.
Sacramento, CA 95814	Sacramento, CA 95814

These hotels are adjacent (on opposite sides) to the Sacramento Convention Center. Events will be held in all three locations.

The SAA rates at both co-headquarters hotels are: \$184 sgl/dbl; \$209 triple; \$234 quad

For reservations at either the Sheraton Grand Sacramento or the Hyatt Regency Sacramento: **Cut-off Date: March 6, 2011**

Online reservations links are available from SAAweb ([www.saa.org](http://www.saa.org)). Reservations by phone are also available at both hotels:

Sheraton Grand Sacramento: 1-800-325-3535 or 1-916-447-1700

Hyatt Regency Sacramento: 1-888-421-1442 or 1-916-443-1234

## For Students!

There are several student properties, all of which are about 4 blocks from the convention center/co-headquarters hotels. Students will be required to present valid student IDs upon check-in:

**Clarion Hotel Mansion Inn**  
700 Sixteenth St.  
Sacramento, CA 95814

Cut-off Date: March 9, 2011

Student rates: \$115 sgl/dbl – one bed; \$115 sgl/dbl – two beds, up to two people; \$125 triple – two beds, three people; \$135 quad – two beds, four people

Amenities: Free parking, complimentary wireless, complimentary continental breakfast

For Clarion reservations, please call: 1-800-4CHOICE or 1-916-

## IN BRIEF

444-8000; refer to Society for American Archaeology.

**Holiday Inn Express Sacramento Convention Center**  
728 Sixteenth St.  
Sacramento, CA 95814

Cut-off Date: March 9, 2011

Student rates: \$125 sgl/dbl – one bed; \$125 sgl/dbl – two beds, up to two people; \$135 triple – two beds, three people; \$145 quad – two beds, four people

Amenities: Free parking, complimentary wireless, complimentary hot buffet breakfast

For Holiday Inn Express reservations, please call: 1-800-HOLIDAY or 1-916-444-4436; refer to Society for American Archaeology.

### Overflow Regular and Student Rooms

**Best Western Sutter House**  
1100 H St.  
Sacramento, CA 95814

Cut-off Date: March 9, 2011

Rate: \$129 King or Two Queens

Amenities: Free parking, Complimentary wireless, complimentary wired internet, complimentary cold and hot continental breakfast

For Best Western Sutter House reservations, please call: 1-916-441-1314 or 1-800-830-1314; refer to Society for American Archaeology.



## 76TH ANNUAL MEETING

# WELCOME TO SACRAMENTO

**Jennifer Perry**

*Jennifer Perry is the Program Chair for the 76th Annual Meeting.*

**G**reetings from the Golden State! Now is the time to start making your plans to attend the SAA's 76th Annual Meeting to be held in Sacramento from March 30 to April 3, 2011! The meeting will be filled with an impressive 2,200 submissions that are organized into 270 sessions and symposia. Collectively these presentations represent cutting-edge research in most regions of the world, from Africa to the Arctic, with a strong emphasis on Mesoamerica and the American West. California's rich prehistory and history will be showcased in several organized symposia starting with "California: A Land Of..." on Thursday morning, which will cover a range of topics from the North Coast to the Central Valley to the Channel Islands. In addition to regional foci, archaeological methods and theories, ethics and professionalism, as well as education and public outreach will be discussed. Commencing with the President's Forum on Wednesday evening, sessions and symposia will continue through high noon on Sunday, so plan on staying the entire time. Along with workshops, the Ethics Bowl, local tours, and a host of other scheduled activities, there will be something of interest to everyone!

Held at the Sacramento Convention Center, the meeting is centrally located in the heart of downtown Sacramento in close proximity to a variety of attractions including the State Capitol, California State Indian Museum, Sutter's Fort, and the popular California Railroad Museum. The historic park of Old Sacramento is situated along the Sacramento River, which is a great place to share a meal, drink, or stroll with colleagues. Furthermore, Sacramento is a 'hop, skip, and a jump' from Gold Country and the Sierra Nevada Mountains to the east and San Francisco and the California coast to the west, which offer a diversity of cultural, historical, and recreational opportunities for those who of you are thinking about taking some extra time to relax and explore. During this annual meeting, there will be plenty of opportunities to enjoy the best of California, past and present, and the best of contemporary archaeology. We look forward to seeing you in Sacramento

*Old Sacramento. Photography: Tom Myers. Courtesy of Sacramento Convention & Visitors Bureau.*



## SACRAMENTO IN 2011

**Sannie Kenton Osborn, Dana McGowan, and Susan Stratton**

*Sannie Kenton Osborn, Dana McGowan, and Susan Stratton are the local advisory committee for the 76th Annual Meeting.*

**T**he 2011 annual meetings of the SAA will be held in downtown Sacramento, the state capital of California. Both Downtown and adjacent Midtown offer numerous excellent restaurants and museums in areas where the tree lined streets are pedestrian and bicycle-friendly and an excellent public transit system can be found.

As many of you know, gold was discovered near in January 1848 Sacramento. This discovery sparked the California Gold Rush, with Sacramento at the forefront of the influx of prospectors to the American West. Here they collided with the Native Americans who had occupied the area for thousands of years. To showcase this unique moment in time, the SAA is offering two different tours this year.

The first is a "Mines and Middens Tour" led by noted local archaeologist, Julia Costello, and historian Judith Marvin. This motorcoach tour will take you to Amador County in the scenic Sierra Nevada foothill region just east of Sacramento. Key attractions will include the Kennedy Mine, which at 5912 feet is famous for being one of the deepest gold mines in the world. The Kennedy Mine was prospected in 1860, reorganized in 1886 and continuously run until 1942, during which time it produced over \$34 million in gold. Next stop will be Chaw'Se Indian Grinding Rock State Historic Park, which is the location of the largest collection of bedrock mortars in North America. A local Native American guide will join Julia and Judith to take you on a guided walking tour of the mortars, bark houses, a roundhouse, and the Regional Indian Museum.

The second tour, "Archaeology and History on the Sacramento River," will combine the joy of a boat cruise with visits to both prehistoric sites and submerged shipwreck locations. Led by John Foster, former California State Archaeologist/Underwater Archaeologist, this tour will recount how the Sacramento River has influenced regional settlement patterns in the region, and will provide an opportunity to see the Sacramento River from the water as it was seen by Native American groups, Hudson Bay Company trappers, John Sutter and other Gold Rush pioneers.

On your own you can also visit Old Sacramento, a National Historic Landmark District and a State Historic Park that has over 50 historic buildings spread over 28 acres. Much of the significance of this historic district comes from its early Gold Rush commercial structures and from it being the western terminus of the Pony Express postal system, the first transcontinental railroad, and the transcontinental telegraph.

Other nearby destinations includes skiing in the Lake Tahoe area (about two hours away) and the Sierra Foothills and Napa Valley wine regions (less than an hour away) and San Francisco, easily accessible by public transportation or driving in less than two hours. More local excursions are as diverse as a tour of the State Capital, a trip to the California State Railroad Museum, or attempts to visit all the breweries in Downtown Sacramento (there are 4 and counting).



*Old Sacramento. Photography: Tom Myers. Courtesy of Sacramento Convention & Visitors Bureau.*



## **VOLUNTEER PROFILE:** **Gordon Rakita**

*This column is a new feature of The SAA Archaeological Record. In each issue, we'll be featuring a member of one of the SAA's many committees and interest groups. If there is someone you'd like to see profiled in this column, please contact Jane Baxter. Our inaugural column features Gordon Rakita, Associate Professor at the University of North Florida and a long time SAA Volunteer.*

Last September, I got an offer I couldn't refuse. Jane Baxter, editor of the *The SAA Archaeological Record*, asked me to be "Mr. November." My first thought was that Jane's eyesight had taken a serious turn for the worse. Then, I realized that this is the only publication that would ever have me as a feature-of-the-month. I was somewhat less thrilled when Jane pointed out that the expected length for my column was the same space allotted for an obituary. So, here's hoping that a column of similar length about me does not appear any time soon.

Regardless, I am honored by Jane's invitation. By way of introduction, I am a bioarchaeologist who focuses on mortuary and ritual behavior in the American Southwest. I currently am an Associate Professor and the Program Coordinator for Anthropology at the University of North Florida in Jacksonville. Prior to coming to UNF, I was a principle investigator for SWCA Environmental Consultants in Flagstaff, Arizona. I also have an adjunct appointment in the Department of Anthropology at the University of New Mexico from where, in 2001, I received my Ph.D.

I am pleased to discuss my participation in our Society because it gives me a chance to highlight some of the wonderful things that the SAA does for its membership and for those who actively engage with it. My participation began in 1996 when, as a graduate student, I joined the Student Affairs Committee (SAC). I served on the SAC for four years and ultimately ended up serving as its chair for two years. My participation on SAC gave me a voice within the Society where I could speak to the issues and concerns of students, and an opportunity to engage me with the voices of other students from a variety of institutions. Serving on SAC gave me a much better appreciation for the inner workings of the Society and the sorts of things that our Society is able to do (and no, no matter how much they might want to, the Society can not negotiate for \$20/night student rooms at the meetings). Over my six years of involvement with SAC, I met some incredible archaeologists who I am honored to count among my friends and colleagues.

After SAC, it seemed a natural transition to volunteer to serve on the Student Paper Award Committee (SPAC) where I spent six years, the last three of which as its chair. Serving on an award committee was decidedly different than serving on an advisory committee, and yet again, I was grateful to be able to see and participate in another facet of what our Society does. Serving on an awards committee certainly hones your critical eye, but more importantly, it gives you an opportunity to see some of the best work our members produce. During my time on the SPAC I also served on the Meetings Development Committee, the Membership Development Committee, and as both a moderator and judge for the Ethics Bowl (and if you've never attended or volunteered to help out with the Ethics Bowl, you don't know what you're missing). Having been bitten by the service bug, I was an easy mark two years ago when I was asked to serve on the SAA Press Editorial Board. The work of the editorial board has opened my eyes to many of the issues involved in publishing within archaeology. I am also beginning to prepare for a new role. In 2012, I will serve as Program Chair for our annual meetings in Memphis, Tennessee.

You may have noticed that in this column, I have used the term "our Society." When I say our Society, I mean just that; it is ours. Yes, we pay dues, and in a concrete, financial way that makes it ours. But more importantly, it is ours because we make up the Society. This is not to minimize the incredible staff we have in Washington, D.C., which is the backbone we can always count on. However, the vast corpus of the Society is made up of voluntarily serving members. It is the membership, in their capacities as committee members and chairs, and board members, and editors, and officers that drive the Society forward. My career and my life have been enriched tremendously by being a small part of this collective. I appreciate the opportunities I've been given, the support and fellowship of those whom I have had the honor of serving with, and most importantly the membership that I have been happy to serve.



# DRY DIG

## ETHICS AND ALCOHOL IN MIDDLE EASTERN ARCHAEOLOGICAL PRACTICE

**Benjamin W. Porter**

*Benjamin Porter is an assistant professor in the Department of Near Eastern Studies at the University of California, Berkeley, and a co-director of the Dhiban Excavation and Development Project.*

There were two people there, both archaeologists, and both recognized me from the meetings. So I had no choice but to sit down and have a beer with them [Kent Flannery 1982:265].

It did not take me long to discover that alcohol consumption is an intimate ritual in archaeological practice. I recall my first anthropology club event when I was an undergraduate in the early 1990s: field projects from the past summer gave summaries of their work, each ending with slide images of empty beer cans and clever innuendos about hangovers and campfires. To me, these stories were funny. They revealed a quirky human element to a discipline I was just beginning to join. This initial impression would be reaffirmed in the coming years during graduate school cocktail hours, at the annual SAA conference bar, and, of course, during field research. As my career interests shifted to the Middle East, I found that the ritual of alcohol consumption was deeply embedded in archaeological practice there as well, despite any local or religious customs attempting to discourage the practice.

Not that I mind a drink—I enjoy a cold beverage (or two ... or...) as much as the next archaeologist—but I have grown to realize that the discipline's relationship with alcohol has grown complicated for practitioners, especially those who are designing projects that engage with communities and stakeholders. Consider this: in 2009, the Dhiban Excavation and Development Project, a project I co-direct with colleagues in the Middle Eastern kingdom of Jordan (Porter et al. 2005, 2007), decided to ban all alcohol consumption. We made this decision for several reasons. Less alcohol would reduce the chronic levels of dehydration our team members experienced in this hot, arid climate; it would reduce project and personal expenses; and hopefully it would increase professional behavior among team members. The Dhiban Project would be growing in size over the next few years and it was time to instill some protocols. We had plans to increase the number of undergraduates from the United States, many of whom we anticipated would be under that country's legal drinking age. We would be required to abide by our home

institutions' rules if we were to receive their full sponsorship.

However, our primary motivation for banning alcohol was the fact that we were living in a rural Jordanian town of 15,000 people, nearly all of them Muslim. Alcohol is forbidden in Islam, although today each country has different legal policies about its purchase and consumption (Devasahayam 2003; Kueny 2003). In Jordan, Muslim and non-Muslim alike can purchase alcohol, and it is common to see, especially wealthy, Jordanians drinking in resort hotels, bars, and restaurants, but in Dhiban, no such public displays of drinking are visible or welcome. The town is located next to the site, and a number of our research goals are designed around community collaboration and economic development. In order to build and maintain productive working relationships, a positive persona was therefore necessary. And, as we were determined to make the cultural experience of living in Dhiban just as important as the archaeological field school, we realized the prohibition would be necessary.

So in 2009, the 23-person team of professors, graduate students, and undergraduates attempted a "dry-dig." Despite a persistent grumbling, the season was a success with the project attaining many of its research goals. The team stayed relatively healthy, too. After most of the students and staff had left, the codirectors were relatively pleased with the team's discipline and respect for the local community. But soon after, when cleaning off the roof of the men's house, we found a neatly hidden garbage bag of empty beer cans and liquor bottles, evidence that not everyone had followed the rules....

\* \* \*

From where, exactly, did this relationship between the discipline and the drink arise? The question deserves more systematic study than can be afforded here. If allowed to speculate on origins, one could cite the fact that archaeology as a discipline emerged in tandem with modern leisure activities and access to consumables made possible by the Industrial Revolution and the Victorian Age (Davison 2004:33–35). Antiquarianism was



Figure 1. Tall Dhiban with contemporary Dhiban in the background—view toward the south (Photo: J. Porter).

then a gentleman's discipline carried out by often well-to-do European elites possessing the necessary capital (Levine 1986). The upper class embraced alcohol consumption while temperance movements discouraged it among the lower class, as they were believed to be unable to hold their liquor. European colonial endeavors overseas also meant that the comforts of home—among other things, a steady supply of one's favorite drink—needed portability to keep one from “going native.” Antiquarian archaeology cannot be blamed for everything, perhaps. At some point in our disciplinary practices, many archaeologists adopted a perspective that if one spent a hard day sweating outdoors and working with their hands, they had earned the right to relax with a drink and friends.

Today, drinking alcohol on an excavation seems so natural. But that does not mean the practice manifests itself in the same way. The culture of alcohol consumption differs from region to region and often seems dependent on access in local, often remote areas, and the historical milieus in which archaeological research have evolved. Beer may be the drink of choice for North and Latin American archaeologists, but it has only become a mainstay in the Middle East during the last two decades, thanks to the wider availability of local manufacturers and American and European imports like Amstel. Before beer, gin was the preferred Middle Eastern drink, a choice largely

informed by the nineteenth- and early twentieth-century European archaeologists working in the region. The drink remains very much in vogue today, so long as one can afford the gin, find the tonic and ice, and tolerate a lemon—the lime being rare in many areas of the region. The anis-fermented drink *arak*, known in the U.S. as the Greek drink *uzo*, is a strong second in popularity as it is easy to find given the many local distilleries around the region.

Middle Eastern archaeology presents an interesting limit test. Today, as in the past, projects pay little attention to local attitudes about drinking, despite their awareness that alcohol is prohibited under Islam. If alcohol is prohibited, it is usually due to the fact that the project is sponsored by a religious organization that forbids drinking for doctrinal purposes. Why such ambivalence abounds is partly explained by the fact that archaeologists are almost never required to abide by local practices. Communities often granted archaeological projects an exemption, explaining their behaviors as odd and unfortunate for foreign guests. However, in the past decades, some but not all Middle Easterners have been turning to principles they believe foundational to Islam in an attempt to strengthen families and societies in the wake of what they believe are encroaching “Western” values (Tibbi 2002). Expressions of piety are key to such new awareness, which would be a combination of actions like going

to mosque and wearing certain clothes, to not acting, like abstaining from drugs and alcohol.

During the Dhiban project's first two seasons, we had not given much thought to the consequences of alcohol on the project. We did our best to drink privately, within our rented houses in domains that were considered our own. In a recent season, a few project members regularly consumed one, and sometimes even two, cases of beer per night. Accustomed to these habits from their daily routines at home, these large amounts did not appear to alter their performance. They did not get sick, become dehydrated, or miss our 5:30 AM mornings, although the large expense did set back their travel finances. The problem with their behavior was two-fold. One was that they drank on the roof of our rented house, a space that is only semi-private in crowded communities like Dhiban. Unlike in the interior of houses, one can observe and be observed by their neighbors on rooftop patios, a visibility that matters for a society in which socializing between unrelated men and women can be regulated highly, and people pass judgment on each other's moral fortitude from afar. The second problem was getting rid of the evidence. Carrying garbage bags full of aluminum cans and glass bottles to the garbage bin made a distinct clang that our neighbors easily recognized as the artifacts of the previous night's activities. The community had little difficulty arriving at the conclusion that project members were similar to the stereotypes of Westerners they viewed on their satellite televisions.

So as the project grew more serious about community archaeology, ethnography, and economic development, we realized that it was time for us to reevaluate our own practices in light of local circumstances. We reasoned that if we were to be charged with excavating and then representing Dhiban's cultural patrimony, we should be perceived as something more than drunk and immoral foreigners. In order to make sure that new team members knew what they were getting themselves into, we wrote a project handbook describing the modest clothes people should wear, how interactions between genders would be governed, and not least, the prohibition of alcohol in Dhiban. Prohibiting alcohol from the project was not a popular decision with most project members, especially graduate students. Some believed that the handbook's description was a mere formality to appease university lawyers or Jordanian officials, and that it would not be implemented in practice. In its absence, alcohol became a joke around which project members could bond. When desperate, people made the 45-minute bus ride to the nearby town of Madaba, where kiosks sold beer and Christian restaurants permitted the public consumption of wine and liquor.

We admittedly did not give much thought to how project members would react to the prohibition. We were the directors, after



Figure 2. The minaret of Dhiban's main mosque in the center of town. In the foreground are the trenches from excavations in the 1950s (Photo: B. Porter).

all, and everyone was aware of the rules before they arrived. We had assumed that because most, if not all, of the graduate students had encountered discussions of ethics, archaeology, and descendant communities in their seminars, they would understand the need to make these adjustments in the everyday practice of field research. Furthermore, we assumed that their awareness of archaeology's origins in imperialist projects, especially in the Middle East, would provide an additional rationalization for the changes. But this was hardly the case. Project members instead believed that despite these circumstances, this project should be the exception to such rules. To me, these contradictions between awareness and practice suggest that our ivory tower discussions regarding ethics and archaeology can ring hollow when practiced in the field. Ethics are easy to talk about—and make for great conference sessions—but can they overcome traditions that are so deeply embedded in the discipline?

Here is a little twist in my story: What complicates this project prohibition at Dhiban, ironically, is that alcohol consumption already persists among some locals in the town, albeit quietly and in the shadows of social life. Alcohol consumption is not something discussed in polite company, and when it is, it is usually joking accusations between young men about each other's nighttime behaviors. Perhaps even more ironic is that the most convenient place to drink is the very place where we excavate! The site is littered with broken bottles, evidence that





Figure 3. Remnants of glass alcohol container and cap found on the surface of Tall Dhiban (Photo B. Porter).

the site sees many nighttime visitors. This summer, our hired personnel from the community and I spent an hour cleaning up the plastic bags, on the site in advance of the arrival of important guests. As we cleaned up the broken bottles, we took great delight in accusing each other of being the ones responsible for leaving the bottles there in the first place.

So given alcohol's clandestine presence in the community, one might argue that the project might as well follow suit. I think there are several good arguments against this rationalization, some of which made above about health and expenses. Perhaps the most nuanced counterargument for me is the cultural explanation. In the Middle East, archaeologists who choose to live and work in rural communities are considered guests, a highly regarded position that requires them to play by host's "rules." This is especially true in Jordan, where reciprocal obligations between guests and hosts are particularly strong (Shyrock 2004). An Arabic proverb sums up this relation best: "The guest is the slave of the host, but the guest is a poet." That is, the guest must abide by the host's wishes, eat and drink what he is served, and

converse on topics of his host's choosing—but upon leaving, the guest can either praise or disparage the host's hospitality. Following this cultural logic that mediates our presence in Dhiban, I would argue that there are good grounds for following ideal cultural norms, even if those that set them are not living up to their own standards. Some will critique this position as unnecessarily pandering to arguments for cultural relativism common in the Middle East that seek to justify gender inequalities and tolerance for extreme religious viewpoints. But can one argue in response that alcohol consumption, like access to potable drinking water and education, is a universal human right? Hardly—rather, a community that entrusts a team of outsiders with recovering and representing their cultural patrimony deserves more respect.

\* \* \*

A few days after discovering the hidden containers on the roof, the directors started to wonder if the prohibition would be enforceable in future seasons. Perhaps we were asking too



much of our team? We considered the possibility of a controlled outlet for eligible project members to have the opportunity to drink, but on our terms. One idea was having a designated space and time where members could buy a cold one that the project had purchased beforehand. There would be a slight mark-up on each purchase to account for the costs of transportation and renting the extra space. There would also be a limit to the number that could be purchased each night. Whatever we decide to do in future seasons, I suspect that our decision to at least manage consumption will always be unpopular.

I am not arguing here that the relationship between alcohol and archaeology grow disentangled, but rather we consider how consumption practices unfold in the everyday practices of the discipline, especially in field research settings. Archaeologists are rarely local or indigenous to the places in which they conduct their research, even in North America. We are always and already seen as outsiders bearing strange practices and assumed to be ignorant of local customs. As foreigners, we are often given a pass for our poor behavior, but pleading cultural ignorance when we are fully aware of our hosts' expectations does not justify an exemption. When learning local customs, we will no doubt discover contradictions in logic and practice, as any wise ethnographer will implicitly anticipate. Indeed, measuring our alcohol consumption can lead to the interrogation of other "naturalized" disciplinary practices that rest just beyond the limits of our awareness, but not our hosts'. Such a shift would require that the conversation about archaeological practice that is occurring at the cerebral level about representation, ethics, and law take a more pragmatic turn to consider quotidian practices such as the treatment of hired laborers (Berggren and Hodder 2003); the presentation of ourselves to local, sometimes descendant communities; and the need to learn indigenous languages and customs (Zimmerman 2005). Obviously this conversation has already begun, but just how we do this is certainly worth more discussion in our ranks—no doubt a good topic of conversation at the next SAA conference hotel bar—see you there ... I'm buying the first round ...

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## Announcement: Needs Assessment Survey

Surveys were distributed to all SAA members on October 13, 2010 through a secure link sent to you by this email: [saa-survey@associationresearch.com](mailto:saa-survey@associationresearch.com). A postcard containing the link was mailed out to those members without a current email address on file with SAA. We do need your participation. Please complete the survey by the December 1, 2010 closing date. Thank you in advance for your time.

# OPEN CONTEXT IN CONTEXT

## CYBERINFRASTRUCTURE AND DISTRIBUTED APPROACHES TO PUBLISH AND PRESERVE ARCHAEOLOGICAL DATA

Eric C. Kansa

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Advances in digital technology are transforming archaeology, a discipline that increasingly results in “born digital” documentation. Digital documentation is typically much richer and more comprehensive than traditional paper and photographic film recording techniques. The continuing decline in storage costs and the growing sophistication of database systems help fuel the drive for more complete and thorough field recording and documentation. Digital documentation, coupled with digital communication via the Web, permits far more rapid and comprehensive dissemination of field research.

Dissemination practices, however, have not kept pace with the vastly expanded capabilities and capacity for documenting archaeological research. Traditional publication mechanisms (books, articles, reports) can transmit only a minute fraction of the evidence archaeologists routinely gather (Jones et al. 2003). Thus, while digital storage and transmission costs are in sharp decline, most archaeologists still lack professionally recognized channels to share their field data easily. Thus, many professionals have difficulty seeing incentives for sharing their full research and remain reluctant to participate in open, comprehensive, and rich forms of scholarly publishing.

Professional dissemination channels and incentives clearly need an upgrade. To help meet the need for more data-rich dissemination channels, the Open Context project explored user needs, technologies, and design patterns for building distributed systems. Thinking in terms of distributed solutions is a key requirement for meeting archaeological data-sharing needs. The landscape of the Web evolves rapidly, and there is great need to continually innovate. At the same time, archaeological ethics and scholarly practice demand that we, as a disciplinary community, act as good stewards of the archaeological record. In that sense, while the Web environment continually evolves, we need practical strategies and infrastructure to help preserve and curate our research.

### Open Context: Web-based Publishing of Archaeological Data

To help explore distributed approaches to publishing and pre-

serving archaeological data, we developed Open Context (<http://opencontext.org>), an open access, Web-based platform for publishing archaeological data (see Figure 1). Open Context makes excavation data and collections available for Web searches, queries, and downloads. Being highly generalized, it can accommodate many different archaeological datasets, each with its own recording system and organization. The system enables researchers to describe their observations as they deem most appropriate while still offering capabilities for working with multiple datasets on the Web.

One of the most valuable lessons we learned in developing Open Context is that one system cannot and should not do it all. Open Context can best work as a collaborating participant in a constellation of other essential applications and services. Open Context tries to meet a very specific need, archaeological data publication, and as much as possible, Open Context relies on the talent and energies of other researchers, services, and applications to meet other critical needs.

Many people do not realize that data integration does not require one centralized system. Rather, if systems are designed to allow for easy discovery and portability of data, content housed across the Web in numerous systems can be pooled, understood, and reused. The Web already offers a host of services, standards, and applications that help make content easier to find and organize. It makes sense to work within this established ecosystem as much as possible. To do this, Open Context has a number of features and design attributes that make it Web-friendly. These include:

- **“Mashup-Ready” Data:** Open Context data and querying services come in a variety of data formats (Atom, GeoRSS, KML, ArchaeoML/XML, JSON, CSV). This variation helps ensure that Open Context content can flow into other applications that may visualize it in new ways or combine data from Open Context with other sources (“mashups”). These standards help facilitate technical interoperability for Open Context and its content (Kansa et al. 2010).

- **Deep Linking:** Every item of every dataset in Open Context has its own Web address (URL). This policy of “one webpage per potsherd” enables very specific referencing of Open Context content. This is a key design choice to make it easier for others to add value to Open Context content. Web 2.0 users can tag Open Context content using Delicious or similar services or, in the future, others can apply different semantic standards, including various domain ontologies (formalized conceptual systems for a disciplinary community) to Open Context data (Kansa and Bissell 2010).
- **Open Access:** Open Context requires no login to access, download, or copy data into another system. Its stated policy to refrain from monitoring individual user activities is consistent with the American Library Association’s code of professional ethics to protect patron rights to privacy, confidentiality, and academic freedom. The absence of a login barrier also allows Open Context content to be fully indexed by commercial search engines such as Google or Bing.
- **Open Licensing:** Data portability is not just an issue of access and technical standards; it is also an intellectual property issue. Open Context requires contributors to release data under Creative Commons (<http://creativecommons.org>) copyright licenses. These standard licenses explicitly grant permissions for reuse of content, provided attribution is given to content producers. These licenses open the door to future research, instruction, and other applications. Creative Commons licenses and Open Context’s machine-readable data help insure Open Context’s content can be moved to other applications and archives (Kansa et al. 2005).<sup>1</sup> Because content is not “trapped” in Open Context, Open Context will enable, not inhibit, continued innovation in archaeological cyberinfrastructure.

The design characteristics outlined above position Open Context to work well with other Web applications and services. Because of this, Open Context data can be thoroughly indexed by commercial search engines, annotated and tagged in social bookmarking systems, and processed in mapping and visualization tools like GoogleEarth (see Figure 2). Openness to these commercial services helps make Open Context content easier to find, organize, and use. This openness also addresses critical incentive concerns, within both university-based and CRM archaeology. By exposing primary data to search engines and by linking that data to specific individuals, labs, and contracting firms, Open Context helps raise the online profile of contributors. As more and more people turn to Google in the course of their research, search engine exposure can be an important way to advertise one’s archaeological contributions and expertise.

We also need to build upon more specialized efforts that address the specific requirements of researchers. Archaeological researchers need more than access to content; they also use data to support or critique interpretations and, therefore, need



Figure 1: Open Context home page, with map and timeline overview of published data.

reliable ways to reference specific data relevant to their arguments. Open Context’s architectural emphasis on stable URLs allows researchers to reference both individual records and user-defined sets of records. Stable links to specific datasets and records allow researchers to better use data in narratives and written arguments.

These narratives can be informal, such as an email exchange between collaborators or a post on a blog, or more formal, such as links presented in refereed journals or edited volumes. Making it easier to use datasets in formal publication can help elevate the status and professional recognition of data sharing. To do this, Open Context has adopted the COINS (<http://coins.info/>) standard since 2007. With COINS, users of the popular open source citation management tool Zotero (<http://zotero.org>) can automatically capture citation information from Open Context (Kansa et al. 2007; see Figure 3). Compatibility with Zotero, a completely different application developed by a different team at George Mason University, helps Open Context make citation of archaeological data more convenient.

We emphasize COINS not because it makes Open Context par-

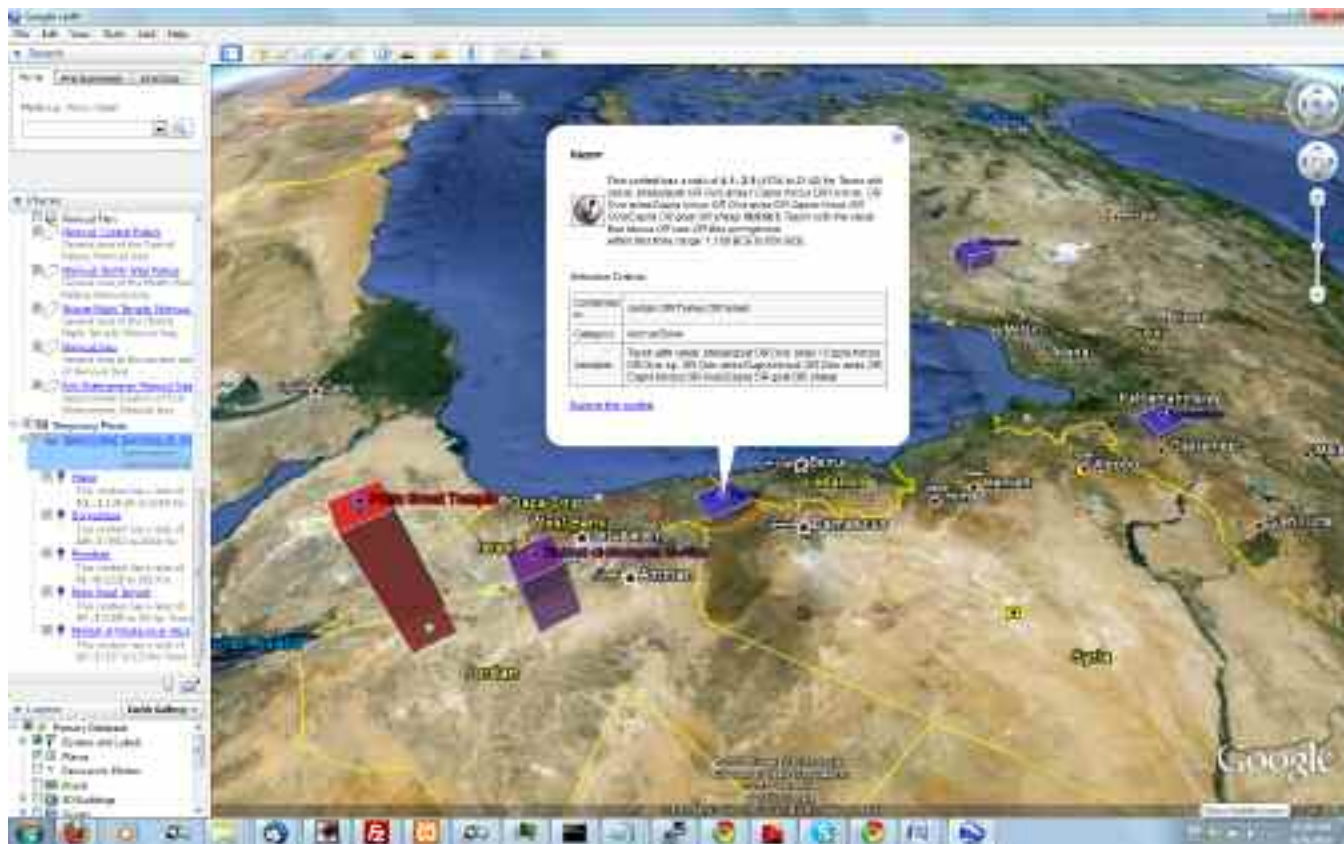


Figure 2: GoogleEarth visualization of Open Context data, showing ratios of sheep and goat to cattle in various sites in the Near East.

ticularly special, but because it helps illustrate why it is important to consider distributed tools and services in data sharing. Any data-sharing effort, not just Open Context, can adopt COINS (or other Zotero-compliant standards). For example, Digital Antiquity's (<http://digitalantiquity.org>) tDAR system also plans to adopt COINS, and in doing so, both Open Context and tDAR can take advantage of the powerful citation management tools and services offered by Zotero. More widespread adoption of a simple standard like COINS can help lubricate the flow of digital data into scholarly workflows.

While COINS adoption is relative easy, other aspects of scholarly citation are more difficult. Data preservation and ensuring the long-term persistence of citations represent tremendous institutional challenges. These challenges are well beyond the capacity of a small effort like Open Context. However, as in many areas, emerging distributed services and infrastructure can help data-sharing efforts like Open Context meet such challenges. Open Context now draws on data preservation and curation

services from the University of California's California Digital Library (CDL) as part of the library's participation in the National Science Foundation's DataNet initiative. These include:

- Minting and binding of ARKs ("Archival Resource Keys"): ARKs are special identifiers managed by an institutional repository. The CDL will help insure the objects associated with these identifiers can be retrieved in the future, even if access protocols such as "HTTP" change.
- Data archiving: The CDL also provides data curation and stewardship to maintain integrity of digital data and to migrate data into new computing environments as required.

The University of California provides Open Context with a strong institutional foundation for citation and data archiving. Unfortunately, few government agencies or university libraries offer such curatorial support. Digital Antiquity's efforts can fill this gap and will help meet a critical need for American Archaeology (see McManamon and Kintigh 2010).



### Looking to the Future: Data Sharing as Publication

Digital data-sharing efforts must do what archaeologists are trained to do: pay attention to context. For data sharing, that context is the Web. As we discussed, Open Context works best by leveraging the tools and services deployed by commercial players as well as other academic computing efforts. This design perspective that emphasizes synergies across distributed and collaborative systems can also apply to archaeological content.

It is unlikely that a one-size-fits-all model for data sharing is either desirable or practical. Just as there are many publishers of refereed papers and articles, many different organizations will continue to play a role in archaeological data dissemination. With so many participants communicating the digital record of the past, greater thought needs to be given to ensure that these distributed efforts complement one another.

One of the great potentials for data sharing is enabling wholly new research programs unprecedented in scope and analytic rigor (Kintigh 2006; Snow et al. 2006). While a few sharing efforts have resulted in important findings based on analyses of pooled data (see, for example, the PaleoIndian Database of the Americas (<http://pidba.utk.edu/>) or the Digital Archaeological Archive of Comparative Slavery (<http://www.daacs.org/>)), the research impacts of shared data are usually more speculative than realized. Unfortunately, online data-sharing initiatives have primarily focused on developing “destination websites.” Such sites typically leave content in splendid, and sometimes beautifully designed, isolation. Systems developers usually call such isolated collections “silos.” Usually, perhaps unintentionally, little thought is given to making collections open for interaction through alternative interfaces or for use in alternative contexts. Data fragmented in small, isolated silos hampers our ability to demonstrate clear benefits for sharing data (Borgman 2010).

Many of the goals expressed by data-sharing advocates cannot be realized simply by putting data on the Web. Data needs to be portable, and open for aggregation and comparative analysis with other datasets, some of which may come from outside the disciplinary boundaries of archaeology. Open Context’s current development focus explores Web services and other technologies to make data more portable across organizational and disciplinary boundaries. Enhancing data portability with legal (Creative Commons licenses) and technical tools (especially feeds of XML-expressed data) will help address the pressing need to make sufficient quantities of relevant data available. Archaeologists widely vary in their research interests. Often, an individual’s interests are quite specific and even esoteric. Typically, no one collection grows large enough to obtain a “critical mass” required to sustain wide interest. It is more commonly the case that bodies of relevant content will be published by several different sources. If one cannot effectively work across these dif-



Figure 3: Citation of an individual object record in Open Context using the Zotero bibliographic management tool.

ferent resources, the network effects promised by data sharing will never be realized.

For the research benefits of data sharing to become more apparent, data publishers should free their content so that the content can easily flow to interested communities, rather than expecting communities of users to flock to an individual collection. This is a very different perspective than the “if you build it, they will come” model. In other words, any one publisher may not be able to provide the best and most innovative way of presenting archaeological data. However, removing technical and legal barriers to portability provides the means for someone else to unlock value hidden in a collection. Data portability is thus a key requirement for building a critical mass of useful content and reaching levels of quantity needed to enable transformative research.

### Conclusions: Data Sharing As Publication

Archaeologists generally recognize an ethical obligation to preserve the archaeological record, including digital data. However, like most professionals, they have many pressing time and resource constraints that make data sharing less of a priority. In recognition of this, Open Context emphasizes “data sharing as publication,” thus integrating data dissemination into familiar patterns of research, communication, and professional rewards. To this end, Open Context does not disseminate “raw data” but instead relies on editorial supervision to add description, documentation, and structure to researcher-contributed content. This transforms raw data into a more polished, attractive, and intelligible product that is still as detailed and comprehensive as

the original field documentation or lab analysis. Open Context has recently established an editorial board to develop editorial policies for data publication and organize optional peer-review of contributed datasets. The peer-review process will take place post publication so that peer-reviewed datasets can be specially tagged to note that they have undergone more rigorous scrutiny.

The steps Open Context has taken to integrate with publishing practices are only partial solutions to the incentive question. Federal agencies contracting archaeologists and university tenure committees must do more to both recognize and reward research transparency. Fortunately, there are signs that the landscape of incentives is shifting, albeit slowly, to encourage greater openness with primary data (Harley et al. 2010). For example, the NSF requires prospective grantees to submit a data dissemination plan for archaeological projects. The NSF Archaeology Program now links to both Open Context and tDAR so that grant-seekers can learn more about services that can help in fulfilling this requirement. To help NSF grant-seekers, Open Context offers a Web-based form that guides researchers in copyright licensing options, interoperability features, links to best-practice guides, and advice on improving data quality. If more funders made and enforced similar requirements, data sharing would no doubt become a more regular part of professional practice.

Similarly, if established archaeological journal publishers also made data dissemination a stronger requirement, sharing practices would be encouraged. However, in order to enjoy many of the benefits of data sharing, archaeological data publishers need to make primary data as open and portable as possible. We must recognize that it is very difficult to anticipate user communities, their needs, and how they may engage with archaeological data. The “killer app” may not necessarily come from within archaeology. Different disciplinary communities, such as climate researchers, historians, ecologists, or geographers, may see hidden potential in archaeological data. Perhaps the most compelling uses of published data will come from educational and public outreach efforts that are so vital for our society and discipline. The more open and free we make our primary data, the more likely it will be used and valued by our peers and by our fellow citizens (Willinsky 2006).

**Acknowledgments.** Open Context, in development since late 2006, is a collaborative effort of archaeologists and technologists. Eric Kansa (UC Berkeley, School of Information) leads software development, information modeling and service design for Open Context. The Alexandria Archive Institute, an independent 501(c)(3) non-profit organization, maintains Open Context and provides editorial oversight of its content. The project has been funded by the William and Flora Hewlett Foundation, the National Endowment for the Humanities (NEH), and the Institute of Museum and Library Services (IMLS).

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## Note

1. Archaeologists face complex and often conflicting ethical demands with regard to intellectual property issues (Hollowell and Nicholas 2008). Some indigenous communities and other stakeholders may have very different values and needs that can be difficult to reconcile with Creative Commons licenses or open access data publishing (Kansa 2009). Researchers should exercise ethically informed judgments before deciding if and how to publish with Open Context or any other venue.

# IS THERE RELIABILITY AND VALIDITY IN PORTABLE X-RAY FLUORESCENCE SPECTROMETRY (PXRF)?

M. Steven Shackley

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During a recent SAA Annual Meeting in Atlanta in 2009 a number of us involved in the x-ray fluorescence (XRF) analysis of obsidian took up a corner of the bar, all of us what I would consider friends. The discussion eventually turned to the emerging portable XRF (PXRF) technology that has hit American archaeology hard and fast in the last few years. What surprised me at the time was the near-religious fervor of some participants and the immediate grouping of the crowd into two seemingly opposing sides. This is when I became interested, both in the discussion and a realization that I had not been paying attention. It seems that, for some, there is an apparent emerging opposition between those who have well-established XRF laboratories and those that are breaking into the compositional analytical field with this new portable technology. At Berkeley, we employ and own two PXRF instruments, and see PXRF as one aspect of a group of instruments used to deal with archaeological problems, and not an end in itself; an analytical protocol shared by other colleagues like Mike Glascock at the Missouri University Research Reactor Center (MURR) and Jeff Speakman at the Smithsonian Institution.

X-ray fluorescence spectrometry (XRF), particularly energy-dispersive XRF (EDXRF), has been a primary tool for elemental compositional analysis of stone and ceramic artifacts, particularly obsidian for decades in American archaeology (Hughes 1984; Jack 1971; Jack and Heizer 1968; Shackley 1988, 2010a). For those not familiar with this technology, a brief introduction is provided here (see Beckhoff et al. 2006; Jenkins 1999; Jenkins et al. 1995 and Shackley 2010a for recent, more in-depth discussions of XRF). The theory is conceptually simple. X-rays are a short wavelength (high energy-high frequency) form of electromagnetic radiation inhabiting the region between gamma rays and ultraviolet radiation. The XRF method depends on fundamental principles that are common to several other instrumental methods involving interactions between electron beams and X-rays with samples, including, X-ray spectroscopy (e.g. SEM-EDS), X-ray diffraction (XRD), and wavelength dispersive spectroscopy (microprobe WDS). The analysis of major and trace elements in geological materials by XRF is made possible

by the behavior of atoms when they interact with radiation. When materials are excited with high-energy, short wavelength radiation (e.g. X-rays), they can become ionized. If the energy of the radiation is sufficient to dislodge a tightly held inner shell electron, the atom becomes unstable and an outer shell electron replaces the missing inner electron. When this happens, energy is released because the inner shell electron is more strongly bound compared with an outer one. The emitted radiation is of lower energy than the primary incident X-rays and is termed *fluorescent* radiation, often called fluorescence in the vernacular. Energy differences between electron shells are known and fixed, so the emitted radiation always has characteristic energy, and the resulting fluorescent X-rays can be used to detect the abundances of elements that are present in the sample. This fluorescent energy is measured through electronic detectors and amplifiers and quantitative determinations derived through software manipulation. In laboratory instruments that can handle multiple samples like the ThermoScientific *Quant'X* at Berkeley, elements from sodium (Na;  $Z = 11$ ) to uranium (U;  $Z = 92$ ) can be acquired with good precision, not generally as precise as neutron activation analysis (NAA), but for many elements of utility in archaeology, quite well (Glascock 2010). For portable XRF (PXRF), each sample is analyzed one-by-one, and due to energy (power) constraints owing to the need for portable battery power, a limited set of elements can be acquired. The number of elements acquired by PXRF will certainly increase in the future, but it will be difficult to obtain those elements over about atomic number or  $Z = 51$  (antimony) because the sheer energy required to displace electrons from outer shells is very great (Jenkins 1999; Shackley 2010b).

What struck me at that casual meeting in Atlanta was not that the introduction of new instrumentation useful in archaeology was a bad thing, but that it had created animosity and heated opinion and an amity-enmity atmosphere. Further, it became clear that there were many PXRF instruments out there being used for any number of applications by a discipline not necessarily prepared for it intellectually, and that there is a connection between the very real and serious issue of poor scientific train-

ing by American archaeologists and specifically here the potential misuse of this emerging technology, as discussed in these pages recently by Dave Killick and Paul Goldberg (2009) (see also Clark 2010 and Shott 2005, 2010, for somewhat different perspectives).

American archaeology has always been keen to embrace most anything new, usually, but not always, to great effect. Sometimes the new technology is relatively benign in its effect on method and theory, but like recent advances in GIS and site-level remote sensing, it has had a great result, and now has had a corresponding great effect on both method and theory and is becoming normative science in archaeology. Sometimes the technology, however, can have such a powerful effect on archaeological inference that it needs examination. Portable XRF is in this category for a variety of intermingling reasons.

Portable XRF has been around for decades in one form or another (Liritzis and Zacharias 2010; Potts et al. 1995; Potts and West 2008; Shackley 2010b; Speakman et al. 2010). Recently it has been readily available through at least three vendors that often are featured at SAA and Geological Society of America (GSA) meetings and regularly attract a crowd. It is, I must admit, enticing to archaeologists, and this is the tie in with Killick and Goldberg's (2009) observations that archaeologists are interested in science, but are not necessarily trained in a scientific discipline, particularly in the United States. What is promised by this new technology is SCIENCE writ large. With virtually no training in the physics and engineering of x-ray fluorescence spectrometry, an archaeologist can go to the field or in the lab and start shooting any number of substances and get "real" numbers. For about one-half the cost of a laboratory EDXRF instrument, an individual, university, or CRM company can get real science for an affordable cost. This could be a very great thing for archaeology and I hope it is someday. In some cases it may be, but just like statistics, "the figures don't lie, but sometimes the liars figure." To be fair, some of these corporate vendors are better than others at communicating the seriousness of this technology, but this still does not resolve the other issue—the training of the users: the American archaeological corpus.

What American archaeology needs to do is slow down a bit and take PXRF for what it really is—an emerging and rapidly changing technology that has the *potential* to make very real changes to our discipline. I am in the un-enviably position of being one of the former managing editors for *Archaeometry* and a current Associate Editor for *Geoarchaeology*. Because of my specialties, I have been getting requests to review archaeological problems using PXRF technology. Expectedly, there is a wide range of variability in the quality of these submissions. What marks nearly all of them is that the decades of protocol developed for laboratory XRF analysis is completely ignored. The analyst is

then left with the belief that the results are automatically good, something promulgated by some of the vendors. One colleague remarked when I noted that the results don't match any of the published source standard data: "It doesn't matter, the results are internally consistent." Taking aside the issue that internal consistency wasn't tested anyway, what have we come to in American archaeology? Back to Killick and Goldberg (2009): Have we come so far from basic precepts in science that reliability (replicating results) and validity (tested by other means with the same data) are no longer part of archaeology? If so, then we are not a scientific discipline and must just rely on an appeal to authority.

I have seen some PXRF projects recently that are concerned with reliable and valid results, but in every case these are scholars that have worked with compositional analysis for some time and/or trained in a course of study that teaches XRF or another mass analysis method (Craig et al. 2007; Nazaroff and Shackley 2009; Phillips and Speakman 2009; Shugar 2010; Speakman et al. 2010). All is certainly not lost.

I have a number of suggestions—a research protocol that is similar to what scientific archaeologists would do for any archaeological endeavor. As in all we do in archaeology we need to establish reliability and validity in our work. It is NOT sufficient to purchase a PXRF instrument and just start shooting boulders, pottery, your plumbing, your wedding ring, etc. It could be meaningless data or very useful data—you must know that to be able to refute it (Shackley 2002, 2010b). As Jeff Speakman and others stated recently, PXRF "is not a black box" (2010).

One cannot gain years or decades of experience with compositional analysis instantly, despite what some PXRF vendors seemingly imply. One vendor in my experience goes out of his/her way to communicate this in a required seminar when an instrument is purchased, but it doesn't always seem to be of much utility. I suggest a number of minimal steps archaeologists must take when using PXRF in the field or laboratory. This is rarely done today in the studies I've seen. This will mean that besides the purchase of the instrument, a number of other materials will have to become part of the toolkit.

#### A Preliminary Protocol for PXRF Analysis of Archaeological Materials

In the 1990s a number of us using desktop EDXRF began to formulate experiments to test the reliability and validity of the technology (Davis et al. 1998). These desktop instruments were becoming common at universities and some CRM companies and the promise was that it would replace the more complex and expensive wavelength XRF (WXRF) instruments in a more user-easy format. Sounds familiar. Our concern was that we



shouldn't just start analyzing artifacts, mainly obsidian and ceramics, without an agreed protocol based on empirical experimentation. Almost to the letter, this applies to PXRF technology today, plus a few other steps peculiar to portable instrumentation.

First, and I know this will ruffle corporate feathers, do not take the opinions of the vendors for gospel. Goodness, we question each other constantly in American archaeology, but when a science vendor presents a new technology we think it's a gift. Each vendor will tell you that their instrument is best. This is the same with laboratory XRF. I propose to test this in the near future (below).

It is impossible to elucidate all the details of a proper protocol in this venue. Davis et al. (1998; Shackley 2010b) spend significant time discussing the results of experiments and XRF theory for archaeologists. The suggestions below will hopefully serve as a springboard for further discussion and experimentation.

- **Standards, standards, standards, and analytical conditions.** Virtually none of the published PXRF papers have discussed the analysis of international or readily available standards, although Phillips and Speakman mention that their results were “derived from the analysis of 15 well characterized obsidian samples that previously had been analyzed by NAA and/or XRF” (2009:1258; see also Speakman et al. 2010). What these samples are or where the data reside was not mentioned. To be fair the authors actually included the instrument settings and parameters and analyses of samples also analyzed by inductively coupled plasma mass spectrometry (ICP-MS), unlike any others I've seen recently. But, these samples would have to be available to all. This also assumes, of course, that the ICP-MS data were correct. WE CANNOT ESTABLISH VALIDITY IF WE DON'T PROVIDE THE PROTOCOLS USED IN ANALYSES AND THE ANALYSIS OF STANDARDS. I've been criticized for using international standards published in Govindaraju (1994) for calibration because of matrix issues (powdered versus glass matrices), but at least these samples are available to anyone, and besides I also include whole rock samples of some of these same standards in calibrations (<http://swxrflab.net/anlysis.htm>). If you are using a PXRF in archaeology, you must analyze standards periodically and publish the results to establish validity, otherwise it's just “trust me.” This impinges on the fallacy of internal consistency (see next point). In regular reports I include the instrumental protocol and analysis of at least one international standard comparable to the material measured. It is also available online and has been updated annually since 1994, <http://swxrflab.net/anlysis.htm>. Again, Phillips and Speakman (2009) offer a good model with the caveats discussed above. My experience

with three manufacturer's PXRF instruments indicates that the software supplied is not necessary and sufficient to establish reliability and validity (see also Shugar 2010; Speakman et al. 2010).

- **Errors of artifact size and surface configuration.** Nowhere in the literature I've seen is systematic experiments with PXRF on the effects of artifact size and surface configuration present beyond our initial work (Nazaroff and Shackley 2009). Our experiment showed that similar to laboratory EDXRF, in this case the ThermoScientific Quant'X both ratioing to either the Compton or bremsstrahlung scatter, 10 mm was a reliable minimum size. Since then, Glascock has noted that analyses somewhat smaller than 10 mm are possible with the Bruker PXRF, but this has not yet been empirically tested (Glascock, personal communication 2010). Most recently I have found with tube collimation, analyses of obsidian artifacts down to 2 mm with good accuracy appears possible with laboratory EDXRF (see also Hughes 2010). As with Glascock and Jeff Ferguson's experience at Missouri, we also found that instrumental precision of the Bruker PXRF did not match the Quant'X, but was close enough to assign to source in most cases, but their instrument is empirically calibrated (Jeff Ferguson and Michael Glascock, personal communication 2009, 2010). One of the PXRF vendors told Nazaroff that “our science was just bad.”
- **System reliability and stability.** As far as I've seen, there has been no attempt to detail system reliability and precision beyond ad hoc statements. Semi-annually we test the Quant'X system through the software by analyzing a single sample, usually a pure copper pellet for 24 hours at the same instrument settings, and as noted above analyze a known standard in each run of 20 samples. All measurements must be well below 1% standard error. How stable are the PXRF instruments? The vendors all present some mention of stability, but it should be tested outside the corporate venue.
- **Qualitative versus quantitative analysis.** One vendor has suggested that directly observing and comparing spectra from source standards and artifacts is adequate to assign to source. Qualitative analysis is not new in EDXRF and the hazards of qualitative analysis has been discussed and the technique rejected for a variety of reasons, primarily the issue of inter-observer error and when ratioing qualitative data the potential for misassignment to source (Hughes 1984; Shackley 1995, 2005). A recent example serves to illustrate. It is possible for two or more volcanic sources to have the same ratio of the selected elements, but very different concentrations. In the North American Southwest, this is the case with the Antelope Wells (El Berrendo) obsidian source in southwestern New Mexico/northwestern Chihuahua and the recently discovered Los Sitios del Agua source in north-central Sonora, sources hundreds of kilometers apart, a misassignment I made using ratios in the 1980s (Martynec et al.

2010; Shackley 1988, 2005). They are both *peralkaline* or mildly peralkaline rhyolites with very different elemental concentrations, but when the spectra are compared they plot identically. No archaeologists in the southern Southwest would like to confuse these two sources. In another example the qualitative method of one manufacturer demonstrated in my lab could not separate the Pachuca and La Joya sources in Mexico, two sources considerable distance apart. Quantitative analyses (weight % and parts per million measurements, PPM) through empirical calibration effectively solve this problem.

### The Proposed Multi-Instrument Comparison Workshop

Keith Prufer (University of New Mexico), Adam Nazaroff (Stanford), and more recently Jeff Speakman and I have been discussing holding an inter-instrument workshop performing the same experiment using the three major PXRF instruments available today—a PXRF shoot out. I suggest that the vendors themselves not be present for the experiments, and the results published online and in print, especially the former. Which instrument is best? What are the sample constraints? How precise are the instruments? Are they stable from one measurement to the next? How does one vendor's results compare to the others? What standards are optimal for PXRF studies? And finally, what instrumental conditions are best? This is a minimum and will begin to establish protocols for the use of PXRF in archaeology which simply are not there today.

My very good friend and colleague for many years Mike Glascock noted that no one single instrument will solve all our problems. Correct again, Mike. We do, however, owe it to our discipline to establish study protocols for this important emerging technology so we can all compare results as in any science. Mike Shott worries that if we heed Dave Killick and Paul Goldberg's warning that archaeology is forsaking science, our "faculties will become populated by people who are physical scientists first and archaeologists only second" (Shott 2010). I'm sorry Mike, but it is quite the opposite now, and our faculties have become more scientifically ignorant and in some cases anti-science in the last decade. This is the crux of the problem with wholesale acceptance of PXRF in archaeology. I'm sure we can become scientific archaeologists and anthropologists at the same time, and integrate PXRF rationally into a scientific archaeology.

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SHACKLEY, continued on page 44

# ARCHAEOLOGY IN THE SWINGING 50s

## AS SEEN IN THE PAGES OF *LIFE* MAGAZINE

Jon Czaplicki

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The 1950s were a time of optimism and exuberance in the United States. World War II was a recent memory, and the country was enjoying a growing prosperity and a plethora of pleasures denied during four years of war rationing. Most Americans learned about what was going on in the United States and the world from newspapers, magazines, and radio; television was still young with very limited, regional programming (my family got its first TV in 1955 or 56 and it was a really big deal). Rather than looking at each of these media, I am going to focus on one magazine's efforts to present archaeology to its readers.

Anyone growing up in the 1950s knew *Life* magazine; it was an icon of American print media famous for its photography. Published weekly from 1936 to 1972, *Life* brought the world's events and people to its millions of readers; it also brought the world of archaeology to them. The Internet and Google Books allowed me to review each issue of *Life* from 1950 to 1959. What I found were articles on archaeology and anthropology writ large. In any given year during this ten-year span, two to as many as seven issues had an article dealing with archaeology or some aspect of anthropology.

The stories spanned the world and ranged from the pseudo-archaeology of sunken galleons and Spanish treasure to an article in the January 1, 1950 issue on a meeting of the American Association for the Advancement of Science that mentioned Margaret Mead and A.L. Kroeber. The December 17, 1951 issue had a story on a new, nationally televised (this was a big deal in the 50s when there were only three major TV networks) quiz show called "What in the World?" Carleton Coon and A.V. Kidder were hosts who along with a special guest had to identify an artifact from the collections of the University of Pennsylvania Museum. The show aired for at least two seasons.

One thing that struck me going through the issues of *Life* was the recurrence of articles on Darwin and evolution. The

April 3, 1950 issue had an article on Raymond Dart's recent discovery of *Australopithecus* and the then current views of the development of early hominids. A June 30, 1952 article by Sir Julian Huxley on mimicry and natural selection was followed in the May 18, 1953 issue by a four-page article based on the book *What is Race*. Sociologists, anthropologists, and geneticists from around the world collaborated on the book to try to clarify one of the world's most contentious issues. Because of the role race had played in so many of the world's conflicts, UNESCO, the educational and scientific arm of the newly established United Nations, translated the book into several languages for distribution around the world in an attempt to educate people.

In the November 7, 1955, issue, *Life* began a 10-part series "The Epic of Man" that concluded in May 1958. Spread over 23 pages, science writer Lincoln Barnett set the stage for the series discussing what was known about the evolution and spread of *Homo sapiens* around the world. Beginning with the then current views of the very early hominids and the precursors of *Homo sapiens* such as the newly identified *Australopithecine* remains from South Africa, he explored how humans developed in the Paleolithic and Mesolithic. Along the way he discussed how religion, art, and culture might have developed. While taking a Eurocentric view, the series nonetheless was an impressive, well-researched effort directed at the public. The list of advisors and consultants was long and included archaeologists, anthropologists, historians, and other scientists from Europe, Africa, the Near East, and the Americas. Barnett blended a liberal use of color photographs, easily understood charts, and colorful artistic interpretations to keep readers interested. The editors even developed and provided, at a nominal cost, learning guides for educators and adult discussion groups. This impressive series was followed in the June 30, 1958 issue with another series by Sir Julian Huxley on Charles Darwin's *World of Nature* that explored the theory of evolution using the development of mammals as seen in the fossil record as illustration.

*Life* provided a mix of articles on archaeological discoveries from the U.S. and around the world. The July 12, 1954, issue had an article on Fred Wendorf's excavations at Midland, Texas, where an amateur archaeologist had stumbled across human remains known as Midland man. At the time, these remains were thought to be perhaps 20,000 years old. The September 19, 1955 issue featured an article by R.S. Ruppe and Franklin Fenenga on an Iowa sand pit where human remains were found associated with bones of Pleistocene bison. While most articles were about professional archaeologists, the editors of *Life* occasionally threw the profession a curve. "Diggers' Delight" in the January 21, 1952 issue focused on a piece of land in central Phoenix, Arizona, where for a couple of dollars the public "rented" a small section of a Hohokam village and "excavated" it, keeping whatever artifacts they found. Some professional archaeological work had been completed at the site, but the 300-plus amateur diggers still found a lot of Hohokam material to take home. The find of the day was a skeleton of a child that disintegrated before it could be preserved with lacquer. A fundraising event sponsored by a civic group to raise money for a new hospital, the "dig" raised \$600.

Archaeological excavations at Tikal were featured in an October 13, 1958 issue, with a follow-up article appearing a year later. An article in the April 5, 1954 issue on a prehistoric burial of a 12-year-old child high in the Andes Mountains of Peru discussed not only the archaeologists' interpretation of the burial but the data used in the interpretation.

The Near East was the focus of several articles. Carleton Coon and Louis Dupree were featured in a May 21, 1951 article about discovery of 75,000-year-old Neanderthals in an Iranian cave and how these remains changed ideas about human evolution. There was a long article in the April 21, 1952 issue on a 5-foot-tall stele from Nimrud. The *Life* article was the first public translation of the stele's text describing Assur-nasir-pal II's battlefield triumphs and the great victory feast he hosted. Kathleen Kenyon's excavations at Jericho were featured in a May 11, 1953 article about the oldest sculpture portraits, and the plaster covered and painted human skulls from the site.

Readers of *Life* were introduced to the magnificent Sutton Hoo burial in a July 16, 1951 issue, complete with beautiful color photographs of the artifacts. The article discussed not only the burial, but what it told archaeologists about early Christianity in England and travel and trade with the Middle East. Five-thousand-year-old lake dwellers in Ireland were brought to life in a January 26, 1953 issue. Again, the exposed lake dwellings were enhanced by artist illustrations

based on the excavation data. The October 11, 1954 issue discussed the London public's interest in the excavation of a 2nd century A.D. Roman temple. The ruins were found near St. Paul's Cathedral during clean up of rubble from the London blitz. Up to 30,000 people a day came to view the excavations.

*Life* magazine was an eclectic mixture of stories on politics, culture, society, sports, the military, recreation, health, travel, and science, usually wrapped around great photography. Although articles dealing with archaeology and anthropology were not particularly common throughout the decade, when they did appear they were often two or more pages long and well illustrated. Two major series—The World of Darwin and the Epic of Man—were in-depth, well illustrated, and generally well written. Eventually both series were published as books.

Articles on evolution were based on science and data; one would be hard pressed to find comparable articles in mainstream "family" magazines today. I came across a 1956 review of the Epic of Man series in the *Journal of the American Scientific Affiliation* (JASA 8 [June 1956]:16–17) that presented an evangelical Christian perspective on science. The review looked favorably on the series, but focused on the evolution of *Homo sapiens* discussed in part one. The major flaw was the lack of an alternative creationist perspective on evolution. The author of the review goes to say that when "evangelicals do something in science to the extent that they become established authorities again and the writers of accepted textbooks, the evolutionary structure of scientific thinking will have to give way to the reasonableness of a sound Creationism cloaked in scientific responsibility." We are still fighting this battle six decades later.

*Life* was one of several magazines that brought world events including archaeology into the lives of a broad segment of the American public. Generally well written and complimented with photography and handsomely done artistic reconstructions, some of the articles that appeared in the pages of *Life* magazine in the 1950s can arguably be considered a form of public archaeology. I would hazard a guess that some of these articles and illustrations may have sparked an interest in, perhaps eventually a passion for, archaeology in more than one child or adult.



# ARCHAEOLOGY IN THE AGE OF AQUARIUS

## MEDIA COVERAGE IN THE 60s

A'ndrea Messer

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The 60s. Civil rights, the Beatles, Viet Nam, and the summer of love. Man first stepped upon the moon and the Berlin Wall went up. Called the psychedelic 60s or the rock and roll 60s, they may have been a decade that encompassed the most dramatic changes we've seen in 10 short years. The decade saw the beginning of space flight and man walking on the moon. It could be called the decade of assassinations, first president John F. Kennedy, then the Reverend Dr. Martin Luther King, and Bobby Kennedy. Lyndon Baines Johnson signed the Civil Rights Act and the first African American since the civil war joined congress as did the first African American woman. Yet in 1965 the Watts riots brought LA to a standstill and in the summer of 1967 race riots tore up Detroit and Newark. The Bay of Pigs invasion failed and the Cuban Missile crisis made us feel unsafe. Viet Nam heated up leading to the Chicago democratic convention, an event that allowed every household in the U.S. with a television to see the Chicago police in action and to make many wonder exactly what was going on in the country.

The 1960s for archaeology were also filled with dramatic changes. The decade saw the beginnings of the "New Archaeology" and the move toward becoming a more scientific discipline; the idea began that the cultural process could be made relevant not only to the rest of anthropology, but to the problems of the world as well (Willey 1980). On the scientific front radiocarbon dating became a useful chronological tool as did other scientific innovations as they came along. Settlement pattern archaeology flourished in the survey of the Valley of Mexico and cultural ecology became a popular approach to understanding how people lived on the landscape.

Research in mortuary practices in the Southeastern U.S. explored the mound builder societies of Moundville, Spiro, and Etowah. Residence patterns were a popular subject in the Southwestern U.S. in areas of Ancestral Pueblo settlement and in the Northeast in the Iroquois areas. Pottery analysis, tree ring dating, and other analytical approaches

became standard tools. On the political front, the National Historic Preservation Act was passed in 1966.

With all this change in archaeology during the decade, what appeared in the press about archaeology during this time? There are no digitized media archives for the 1960s, so the research was done using the printed Reader's Guide to Periodic Literature. The Guide only indexes one newspaper, the *New York Times*, and a variety of magazines. It also includes some journals like *Science* that I have not included. The Guide does not use a standard form of indexing, so identical search terms cannot be used from year to year. In each volume a term like "archaeology" would lead to a long list of "see also" listings. At the beginning of the decade, most articles were indexed as archaeology, but toward the end of the decade, almost no articles appeared under that topic. Articles were then found under entries such as "Indians of North America - prehistory," "Indians of South America - prehistory," "biblical antiquities," "cave drawings and paintings," "underwater archaeology," "man - prehistoric," or "man origins - antiquities." Because of the inconsistencies in indexing, the results of this search are by no means complete.

The bars in Figure 1 show the distribution of stories for each year through the decade. The total number of stories for the 10 years was 201, which averages to about 20 archaeology stories a year. The year with the greatest number of stories, 1968, had 32 stories on archaeology, and the year with the fewest stories, 1965, has 12 articles. Newspapers and magazines have only a limited amount of space in each issue to publish articles. During years that have large numbers of public events like assassinations, riots, moon shots, and military offensives, those topics should take up a larger than average portion of available pages. Conversely, in years that are quiet, without major public disasters or events, there should be more pages available for non-breaking news. Archaeology is almost always published as feature articles and is rarely breaking news. There is no apparent correlation between calm event-less years and more archaeological stories and

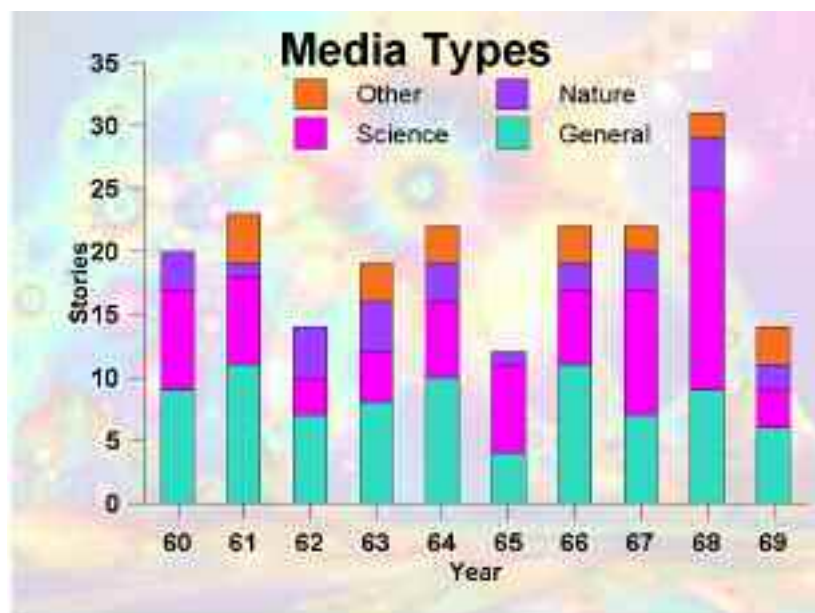


Figure 1.

event filled, even chaotic years and fewer archaeological stories. The most event-filled year of the decade was 1968 but it is the year with the most archaeologically related stories. The least eventful year in the decade was 1967, but it had 22 stories, which is about average. The least number of stories, 12, did, however occur in a moderately event filled year, 1965, which was the year that included stories on the New York City blackout and large numbers of stories on sending troops into Viet Nam. It appears that the publication of archaeological stories is probably not linked to current events.

Figure 1 also shows the types of publications in which stories on archaeology appeared during the 1960s. General interest publications include the news magazines like *Time*, *Newsweek*, *The Saturday Evening Post*, *Look*, *Life*, and *Saturday Review* and the only newspaper in the dataset, *The New York Times*. A variety of publications that focus on nature and natural history also contained archaeological stories, including *National Geographic*, *Natural History*, *National Parks*, and other publications. Popular science magazines were another type of publication that contained archaeology stories and include *Scientific American*, *Popular Science*, *Popular Mechanics*, *Science Digest*, *Science News*, and its precursor *Science News Letter*. The other category of publication in which I found archaeology stories includes women's magazines, men's magazines, regional magazines, and specialty magazines (ranging from travel to hobbyist publications).

As expected, the science publications had quite a few stories, as did the nature category, although it was surprising that *National Parks Magazine* carried so few articles on archaeology as its range of topics is limited to parks-related information. Perhaps most surprising was the steady number of archaeology stories that appeared in general publications. While the coverage of archaeology in this category of publication is still quite low numerically, the presence of archaeology as a topic of interest is a pleasant surprise.

Individual stories were categorized according to the rules used in the Guide to Periodic Literature. This resulted in four categories, terrestrial archaeology—good old dig in the dirt stuff, underwater archaeology, cave archaeology, and biblical archaeology. The distribution of articles across these categories is shown in Figure 2.

Surprisingly, underwater archaeology is, percentage wise, overrepresented. The percentage of underwater archaeology stories is much greater than the percentage of underwater archaeology actually carried out. Perhaps sunken treasures, pirates, and gold doubloons, or the idea of lost sunken cities makes this type of archaeology more attractive to non-archaeologists. There were at least two stories on Atlantis and a variety of real archaeology stories that covered underwater archaeology including one story on archaeology and the sponge trade.

Cave archaeology was big. Just as rock art attracts many people today, in the 1960s stories about cave painting were very popular. During this decade environmental and biological degradation of the Lascaux cave paintings in France was a serious concern and a number of articles reported these problems and possible solutions. However, many of the cave stories were also about finds in U.S. caves, artifacts, and cave dwellers rather than their art.

Biblical archaeology was hardly represented at all among archaeological stories in the 1960s. In 1960, 1962, 1965, and 1967 there were no biblical archaeology articles in the popular press. In other years there were only a few stories. While American anthropological archaeology during this decade increasingly considered biblical archaeology amateur and unscientific (Freedman et al. 2000), that should not have influenced reporters and writers. The few biblical archaeology stories that do appear are in Christian publications or travel publications including one story on visiting Masada in Israel.

The archaeological articles were then classified by type of story: geographic locations, technology, travel, and art. Fully 87 percent of the archaeological stories had a specific geographic location as the central feature, which is not surprising. What is surprising is that 7.5 percent of all the articles deal only with technical archaeology. There were other sto-

ries that had technological content, but focused on a specific location. Certainly one would expect *Scientific American* to technology only stories and *Science News* is famous for short articles on technology. What was surprising was that a publication like *Newsweek* carried an article about scientific dating. Another surprise was that only one story dealt with art rather than archaeology. Most of the stories about cave painting and rock art included anthropological approaches. Travel and archaeology made up only 5 percent of the stories making it apparent that archaeology was probably not a tourist draw in the 1960s.

The geographic location category was then broken down to determine the areas of the world covered by archaeological stories during the decade. There is, or at least there was, a general idea that Americans did not appreciate their history or prehistory. With this in mind, the assumption was that the majority of stories would be old world archaeology. This did not turn out to be true. During the sixties, Americans were interested in the archaeology of the U.S. Fifty five percent of the geographic location stories were New World stories with only 33 percent Old World. One of the hot spots in archaeology during this 1960s in the Old World was the Middle East, which accounted for the most interest with about 31 percent of the archaeology stories. These stories include all the biblical archaeology stories and a small portion of the underwater archaeology. Middle Eastern stories also included stories on

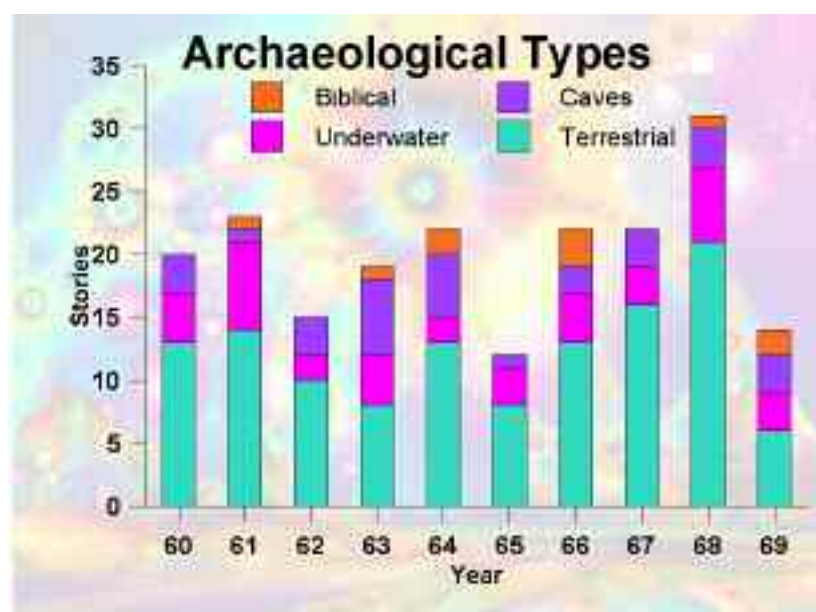


Figure 2.

such places as Petra in Jordan. Next in popularity was Europe with 23 percent of the geographical location stories. Many of the European stories were about cave paintings in France and Spain, or were historic shipwreck finds. There was almost no archaeology from the British Isles represented in the geographic location category. Because of the passion for archaeology in Great Britain and because of the shared language, this should have been a significant category, but was not.

The next largest area covered by archaeology stories is the Mediterranean, which includes nearly 15.5 percent of the stories. Many of these are about underwater archaeology, with a sprinkling of Greek archaeology included. Almost 14 percent of the geographic location stories were African, most dealing with human origins. Some of the Africa stories dealt with rock art and civilizations in Saharan and sub-Saharan Africa.

Nearly 10 percent of the geographic location stories could not be pinned down to a specific area by reading only the headline and are classed as unknown and the remainder of stories in the Old World geographic location category are a smattering of Asia, Pacific Islands and Scandinavian archaeology stories.

In the New World segment of the geographic location stories, 58 percent of the stories were about U.S. archaeology—prehistoric or historic. Another 20 percent were Mesoamerican archaeology stories with only 8 percent stories about South American and only 6 percent categorized as North American but not Mexican or U.S. These stories were mostly about Caribbean archaeology. There were absolutely no Canadian archaeology stories. Interestingly, 6 percent of the New World stories dealt with the peopling of the Americas. That seems a high number of stories on a very narrow topic. They included a story in *Time*, December 8, 1967 called “Overkill, not over chill; theories of Paul Martin.”

How should archaeologists feel about the coverage of archaeology during the 1960s? That depends on the specific articles considered. Some of the stories were serious, including

- “Unearthing History at Casa’s Grandes,” *Americas*, July 1960
- “Mysterious Maya. Who was he? Skeleton discovered at Tikal,” *Life*, April 26, 1963
- “Mystery Hunters of Lovelock Cave,” *Field & Stream*, June 1964

Others were not so edifying. Some were just plain puzzling. In 1967, *Newsweek* and the *Atlantic Monthly* had stories on

Atlantis. I was unable to see either article, but I’m sure they were fascinating.

Some stories had difficulty believing dates considering the time and the until recent earliest dates of humans in the New World.

- “30,000 years ago,” *Newsweek*, August 1, 1969
- “40,000 year old Americans,” *Science Digest*, August 1967
- “Mexicans 24,000 years ago,” *Science News*, November 1968

But these are not the scariest stories from the 1960s. There are ones with titles that make an archaeologist cringe. We couldn’t make these titles up if we were thinking of the worst possible archaeology stories.

- “It’s fun to dig things up on week ends,” *Changing Times*, Aug 1960
- “Dig,” *Esquire*, February 1968
- “Holiday Handbook, digging for America’s Past,” *Holiday*, September 1964
- “Dig to Antiquity in your back yard,” *Science Digest*, July 1968

In conclusion, I find it difficult to characterize media coverage of archaeology in the 1960s. An excerpt from an article that appeared in *Time* magazine on May 10, 1968 on a widely covered story may sum up the ambience of the 1960s.

There was also evidence that the early Washingtonian had suffered a grisly fate. Both human and animal bones found at the site were blackened—probably by fire—and some were split as if someone had tried to get at the bone marrow. “I think that it’s entirely possible that the Marmes man was consumed by his buddies,” says Geologist Fryxell. “In other words, they had him for dinner.” From the fragmented condition of the skull, it was plain that Marmes man had also suffered from Excedrin Headache No. 1.

Whether Fryxell was correct about the cannibalism hardly matters.

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# THE IMPACT OF KOSTER SITE MEDIA RELATIONS ON PRESS COVERAGE OF OTHER ARCHAEOLOGICAL PROJECTS

Renata B. Woly nec

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**T**he early 1970s saw the beginnings of a sea change in how the archaeological community viewed public interest in archaeological sites and work. Although these changes were slow in coming, publicity for the Koster site (Figure 1), a multicomponent Archaic site in Illinois, showed the archaeological community that print media and the public were not only interested in the past elsewhere, but that the past in North America had its own allure as well.

Contrary to the actions of much of the archaeological leadership at the time, Koster Site leadership intentionally courted public interest by publicizing its work in nationally popular and prestigious print media. Although articles appeared in only a few publications, they reached millions of subscribers.

Because Koster Site publicity is perceived as unique, I set out to determine if its success was an aberration or the start of a trend. I discovered neither was true. In the process, I uncovered other trends in print media coverage of American archaeology during the 1970s.

The 1970s were a troubling, dynamic, and innovative time in American history. The shootings at Kent State, the resignation of a US President, the end of the Viet Nam War, the admission of China to the United Nations, the boredom of the final moon missions, the taking of hostages in Iran, the first test tube baby, the beginnings of legalized abortions, the first home computer, the first woman to be admitted to West Point, the first black man to win Wimbledon, the founding of Microsoft and Apple, the invention of e-mail, the creation of the EPA, the release of radiation at Three Mile Island, the release of *Star Wars*, the death of Elvis, the break-up of the Beatles, and the release of the first Black Sabbath album barely represent this time of turmoil and accomplishment.

The 1970s were equally dynamic for archaeology. The Society of Professional Archeologists organized and developed a code of ethics and performance in an attempt to profession-

alize the field. The Society for American Archaeology published guidelines for cultural resource management. Important federal and state laws were passed that enacted major changes in the government's responsibilities toward cultural resources, which now included preservation, stewardship, accountability, protection, restoration, and maintenance among other roles. Federal agencies became major employers of archaeologists. International agreements provided guidelines for governments working together to reduce trafficking in antiquities.

With respect to research, the Meadowcroft Rock Shelter and Monte Verde demonstrated that people had been in the Americas long before Clovis and Folsom. The Afar region and Laetoli in East Africa provided compelling evidence that bipedal humanity was much older than previously believed. The discovery of the ceramic warriors in China underscored that there was an ongoing "wow factor" in archaeological discoveries. The traveling King Tut exhibit demonstrated that the public was willing to stand in long lines and pay to see archaeological remains. Methodologies of the New Archaeology were applied all over the world, and the Koster site, one of these places at the forefront of the New Archaeology, became famous through massive, but selective, press coverage.

I realized early on that establishing the impact of Koster Site press coverage on press coverage of other archaeological sites or issues would be difficult. My research was premised on the following: If Koster Site coverage had a positive impact on the media coverage of archaeology, there would be an increase in the number of articles about archaeology, especially American archaeology, after the Koster articles appeared. I also felt this potential increase would be most apparent in the print media venues that had already covered the Koster Site. Three of the print media venues covering the Koster Site had a combined total of over 25 million subscribers: *Reader's Digest*, *Time*, and the *New York Times*.



Figure 1. The Koster Site. Photo Credit: Center for American Archeology. Photo by Delbert Baston.

Therefore, these three publications were singled out for a closer look.

The 1,611 print entries evaluated during this research were found in searches of *The Reader's Guide to Periodical Literature* and *Lexus Nexus Academic* (Figure 2). Graduate assistant Roberta Shorts and undergraduate student Margaret Klees of Edinboro University of Pennsylvania spent over 100 hours searching these sources for articles of possible interest. Forty search terms were used to discover articles on archaeological topics in *The Reader's Guide* (Figure 3). The search terms "archaeology," "antiquity," and "man prehistoric" accounted for almost 55 percent of all of the articles selected. They found 698 articles from 86 periodicals on archaeology in *The Reader's Guide* including 12 articles from *Reader's Digest* and 26 articles from *Time*. During the first seven years of the 1970s, articles about archaeology in the Americas ranged from 45 percent of articles about archaeology in 1971 to 62 percent in 1975. The last three years of the decade showed a dip in frequency of articles about American archaeology to as low as 26 percent in 1978. In *Lexus Nexus*, they found 913 entries on archaeological topics in the *New York Times* alone

Figure 2. Searching the Print Media—1970s

#### Sources Searched

*The Reader's Guide to Periodical Literature*  
*Lexus Nexus Academic*

#### Focus

English language and U. S.

#### Search Words

*The Reader's Guide to Periodical Literature* - 40  
*Lexus Nexus Academic (NY Times)* - 14

#### Articles Evaluated by Source

*The Reader's Guide to Periodical Literature* - 698  
*Lexus Nexus Academic (NY Times)* - 913

during the 1970s. Fourteen search terms proved useful in identifying these articles. Of these, "anthropology" was the most inclusive of archaeological topics.

Of the 12 articles identified in *Reader's Digest*, nine focused on archaeological themes and three focused on human origins or fossils. Of the nine archaeological items, five focused on the Americas: one discussed problems of human origins in the Americas, one addressed the destruction of archaeological remains, two were on topics relating to the Maya and the final article focused on the Koster Site. There was no increase in the number of articles about archaeology or American archaeology stemming from the coverage of the Koster Site, but there was at least one article about archaeology every year of the decade after the appearance of the Koster Site article. Of note, 1978 included three articles on archaeological topics, including an article explicitly addressing problems of looting: a topic that may have been introduced due to increased interest in protecting archaeological sites.

Of the 26 articles identified in *Time*, 15 focused on archaeological themes, one on a new society called the Tasaday, one on primates, and nine on human origins. Seven of the articles on archaeology focused on the Americas. One article discussed problems of human origins in the Americas, another reported on petroglyphs, and another on the destruction of archaeological remains. Other articles focused their attention on an individual site: including one the Koster Site, one on a historic site, and two on the Nazca Lines. There was no indication that the coverage of the Koster Site had any positive affect on media coverage of archaeology generally, and, in fact, there were no articles in *Time* magazine on American archaeology in the last four years of the decade. While suggestive, there was insufficient information to determine if

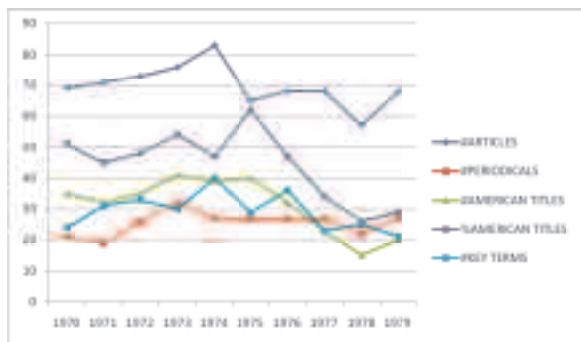


Figure 3. Variations in Archaeological Topics in Reader's Guide to Periodical Literature During the 1970s.

interest in the Koster Site article impacted future choices relating to articles about archaeology. As in *Reader's Digest*, *Time* magazine did feature a 1978 article that addressed problems of site looting, perhaps also indicating a newfound awareness and interest in site protection.

The evaluation of a newspaper source provided somewhat different results than those obtained from reviewing popular magazines. Although many readers see the *New York Times* as a national and international newspaper, it is primarily a newspaper that covers local events: those taking place in New York City and surrounding areas. Therefore, unlike the other two media outlets surveyed, it covers stories of possible interest to its local readership as well as non-local readership. The *Lexus Nexus* search identified 913 entries on archaeology published in the *New York Times* during the 1970s. These entries were news articles, features, obituaries, announcements, and letters (Figure 4).

Archaeology-related entries included an eclectic mix of topics: museum-related issues, laws associated with archaeology, archaeological techniques and methods, discoveries and their implications, specific controversies in the field, and changes in archaeological thinking and interpretation. There was an overall increase in coverage of archaeology topics from 40-plus annual articles at the beginning of the decade to over 140 annually by the end of the decade. Many of the content and discovery stories included lines of evidence from multidisciplinary sources and were related to science in a broader sense.

Two hundred forty-two entries were about New World archaeology, with the "Peopling of the Americas" being the single issue given the most coverage. There was no apparent trend toward increased interest in American archaeology stemming from Koster Site articles. Two hundred sixty-two

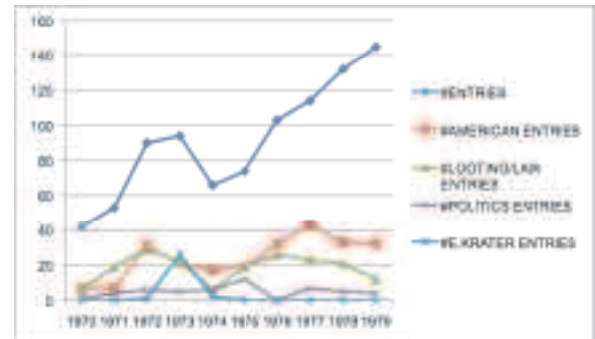


Figure 4. Variations in Archaeological Entries Found in the New York Times during the 1970s.

entries focused on ownership issues, looting, smuggling, pilaging, permitting, disputes among governments, treaties and laws or using archaeology to punish governments. Many of the other archaeology stories were associated with classical and biblical archaeology. Others focused on local museum issues. A very few additional entries actually discussed the sale of artifacts with a critical view.

This search of three print media outlets that were central to promoting the Koster Site to the public demonstrated that the print media in the 1970s were not only interested in the past, but also that its practitioners believed the far past in North America had its own allure for its readership. The articles about the Koster Site represented national interest and a massive reading audience, which was afforded to very few individual archaeological sites. The attention to detail and accuracy of information about the Koster Site in the articles met the unvoiced expectations of the public that archaeology was science, and the corollary attitude that science was to be trusted. In no case did any article on the Koster Site seem to increase interest in archaeology (as evidenced by numbers of articles on the topic) in the periodicals and newspaper evaluated for this research.

In fact, it may be that the success of the Koster Site in the print media was influenced by a pattern of interest that already existed. Articles about the Koster Site were part of a trend representing diverse interests in the past, which was sustained, with some variation, throughout the 1970s. Perhaps the biggest change exhibited by the print media of the 1970s was the increased inclusion of articles that suggested directly or indirectly that the past belongs to the people, and that specific peoples have a right to the remains of their past. This was not yet mainstream archaeological thinking.

# ARCHAEOLOGY AND THE MEDIA IN THE 1980s

Rachel Most

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The 1980s was a decade known for bad fashion, excessive living, and greed. Some of the major historical and cultural events of this decade included the Miracle on Ice (the U.S. ice hockey team beating Russia), the wedding of Princess Diana, the election of the first woman to the Supreme Court, the Exxon Valdez spill, the worst nuclear disaster ever in Chernobyl (1986), and the decade when the U.S. Agriculture Department tried making ketchup a school lunch vegetable (1981). These events, and so many more, are ones many of us can recall. But what was happening to archaeology in the media in the 1980s? In this paper I will discuss three types of media—news articles, television, and film.

A series of searches using *LexisNexis*, an online searchable archive of newspapers and magazines, revealed the standard kinds of articles one might expect. The focus tended to be on Old World finds—finds in Rome or China, for example, or on fossil remains from Africa that pushed back the date of our oldest human ancestor. The verbiage is pretty standard: “missing link,” “oldest finds,” “pushes back the date,” “new clues to old problem,” “untold stories,” “archaeologists dig the past,” etc. These words and terms are designed to attract the reader so they buy the newspaper or magazine and read the article. And while these “catchy” headlines and articles probably do attract readers, I would argue that most of the general public has little to no idea what archaeology *really* is or what archaeologists *really* do even if they are momentarily captivated by the past.

*LexisNexis* search for the 1980s that used the words “American archaeology” produced about 30 articles (not including obituaries); most were from *The New York Times* and the *Washington Post*. These articles were about early hunting techniques, agriculture, sacred sites, sites about to be destroyed, the earliest humans in the New World, looting, accidental finds (salvage work), and historic period sites. There were also several articles written on the Maya, the Aztec, and the Inka.

A search on just “archaeology” produced over 3,000 results. Similar results were obtained when searching on terms such as “prehistory.” These broader searches produced an array of articles including obituaries and those on the awarding of degrees. A quick scan determined that most articles were about the Old World and some were not really about archaeology. This reinforces the findings of others. For example, Plog’s review of *Archaeology* magazine cover stories showed that the “superlatives” used to describe the Old World, such as “splendid, exquisite, sacred, defiant, eternal, or glorious,” were rarely used to describe the American Southwest (Plog 2003:183). Articles on the Southwest typically described societies that “fought, fled, and failed” (Plog 2003:183). This, I believe, is a problem for our discipline. Thus, in sum, the 1980s may not have been that unique a decade in terms of how archaeology was depicted from a purely newsprint-worthy viewpoint.

In an attempt to make archaeology both realistic and more accessible, PBS television released the first season of the *Odyssey* series in 1980 with a second season in 1981. Six films in the series were about American archaeology: *The Chaco Legacy*, *The Incas*, *Maya Lords of the Jungle*, *Myths and Moundbuilders*, *Other Peoples Garbage*, and *Seeking the First Americans*. Public Broadcasting Associates of Boston produced the series, with major funding by the National Endowment for the Humanities. These films remain some of the best documentaries made. The series also included the films *Franz Boas*, *Margaret Mead* and *The Three Worlds of Bali*. The BBC also produced several TV documentary films such as *Sutton Hoo* and *Digging for Slaves* and the long-running, fictional *Doctor Who* extended into the 1980s.

Of the 20-plus feature films from the 1980s that had some connection to archaeology, there can be little doubt that the most well known are the three Indiana Jones films: *Raiders of the Lost Ark* (1981), *Indiana Jones and the Temple of Doom* (1984), and *Indiana Jones and the Last Crusade* (1989). These



three films, as well as the lead character, Indiana Jones or Indy, had, and continue to have, a significant impact on archaeology. They also resulted in a good amount of debate and discussion.

A brief word, first, about the other films from this decade. These films cover a range of topics. Some are not truly about archaeology; rather, they have a lead character that plays an archaeologist. Films in this category include *The Spring* or *The Purple Rose of Cairo*. Others are horror films that depict fictional underworld towns or people being buried alive in crypts such as *Alien from L.A.*, *The Curse of King Tut's Tomb*, *The Tomb* or *Munchies*. Some focus on a story around a specific artifact. Interestingly, two films, *Clan of the Cave Bear* and *Quest for Fire* did not come up in any search on films about archaeology or prehistory. These two films are not about archaeological methods or an archaeologist; rather, they depict a specific time period in prehistory.

It was, however, the Indiana Jones films that hit the trifecta; they featured an archaeologist and the first and the third film had a great deal to do with archaeology. The question is what impact did these films have on archaeology? Much has been written and the opinions fall into two categories—those who argue the films had a positive impact and those who argue that the films had a negative impact. One website ([http://www.helium.com/debates/131864-is-indiana-jones-bad-for-archaeology/side\\_by\\_side](http://www.helium.com/debates/131864-is-indiana-jones-bad-for-archaeology/side_by_side)) has a running poll that asks this question with 680 votes registered as of October 7, 2010. As of this date, 139 people voted that the film is bad for archaeology and 541 voted that it was not; 30 articles on the topic have also been posted.

Those who argue the films were, and perhaps still are, good for archaeology point out that since they were made as fictional movies the public is smart enough to know the difference between what is real and what is not. They argue that the movie brought people into the discipline and that they have benefited archaeology by “getting the audience thinking and talking about the ancient world” (Germain 2008). The films also inspired the Indy Spirit Award sponsored by the Archaeological Institute of America (<http://www.archaeology.org/0805/trenches/indy.html>).

As for the negative, Holtorf (2008) notes that “archaeology means adventure” and that “the associations of archaeology with adventure are as old as archaeology itself.” But he goes on to argue, and I agree, that these films are not always harmless entertainment. He notes correctly that the films have “highly problematic colonial and imperial undertones” and that the films give the impression that the main role of

the archaeologist is to “‘rescue’ artefacts from the colonized world for the greater benefit of science and civilization” (Holtorf 2008 citing Shohat and Stam 1994:124). Holtorf also argues that the film has turned some people away from the field of archaeology. In contrast to those who have argued that the films had a positive impact because they brought people to archaeology, he wrote:

the portrayal of archaeologists in mainstream popular culture as primarily white, male, heterosexual, “able-bodied” individuals serves to alienate experiences, identities and individuals that do not conform to this model of the ideal archaeologist [Holtorf 2008].

Holtorf also cites a survey by Jane Baxter (2002) in which she found from discussions with students that they:

Consistently stated that these images left them feeling alienated from archaeology as a discipline, that archaeology was an inaccessible discipline to the lay public, and that they themselves probably could never be archaeologists.

Pyburn (2008) also argues that more harm than good may have been done by this film series. In one of the more critical statements she writes that archaeologists:

are endorsing a movie about a white Euro-American stomping into places that are economically dependent on the US and Europe, where he kicks, shoots and punches the anonymous locals, before making off with a priceless treasure, which he plans to “protect” in a museum.

Pyburn (2008) then adds “I am not even going to comment on the role of women in these movies.”

How did these films and the lead character depict archaeology in this decade and were these films good or bad for the discipline? Perhaps this is not the correct question to ask. The films are fiction—pure fiction. Perhaps the better question to ask is how can the discipline leverage the publicity and excitement over these kinds of films and convert them into “teaching moments” in a wide range of settings (e.g., the classroom, public lectures, news stories, etc.). How do we take these films and teach the truth? How do we make archaeology come alive for the public? Where is the balance between what we as archaeologists know to be the careful and tedious field-work, lab work, and analysis and the fictional world of an Indiana Jones? These are the challenges for all of us.

These films clearly had, and continue to have, a profound effect on archaeology. They were a bold and clear statement that archaeology equals adventure. I would also argue that in this decade the image of the archaeologist in film media changed. The stuffy, typical British archaeologist was gone and the dashing and adventurous Indiana Jones replaced him and endures as a powerful image to this day. The question is not is Indiana Jones good or bad for archaeology; the question is, how can we be sure these films have a positive impact?

*Acknowledgments.* I would like to thank Johanna Drucker, Shereen Lerner and Stephen Plog for their comments on earlier versions of this paper.

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## ARCHAEOLOGY AND THE MEDIA IN THE 1990s

Johna Hutira

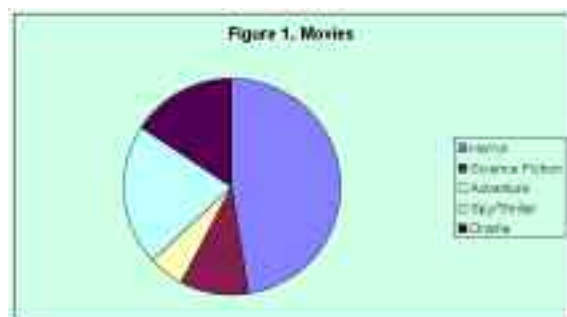
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We watched O.J.'s acquittal of murder charges, mourned Princess Di and discussed Bill Clinton and *that woman* at the office water cooler. Shootings at Columbine, genocide in Rwanda, and a bombing in Oklahoma City all played out in full color on our televisions. Some good things happened too. Nelson Mandela was released from prison and we shared in that elation. Certainly, mass media has shaped how we think to some extent (thanks Fox News) and allowed us to explore worlds that were previously only small specks on a globe. This changing landscape of media that enables immediacy and requires 24 hours of subject matter largely came to be in the 1990s, and we can ask how these mediums portray archaeology and archaeologists. This study examines the frequency and accuracy with which archaeology and archaeologists were presented in television and movies during the 1990s.

#### Archaeologists in the Movies

Data for assessing archaeologists in film from 1990 to 1999 was gathered from the Internet Movie Database (IMDB) and from Amazon.com. My search was powered by the keywords "archaeology" and "archaeologist" in all forms of its spelling. I also searched for "historic preservation" and "cultural resources." Not surprisingly, the latter two keywords yielded no results. Three of the identified movies featured a character called an archaeologist but who was in fact a paleontologist. (My personal favorite title: *Prehysteria*.) I was curious to see if this misidentification operated the other way around so I performed one additional search for "paleontologist." None of the films that turned up in the search featured an archaeologist misidentified as a paleontologist.

My search yielded 19 films. I then classified the results by genre (e.g. Horror, adventure, drama, science fiction, spy/thriller). The vast majority of results fell into the horror category ( $n = 9$ ) (Figure 1).

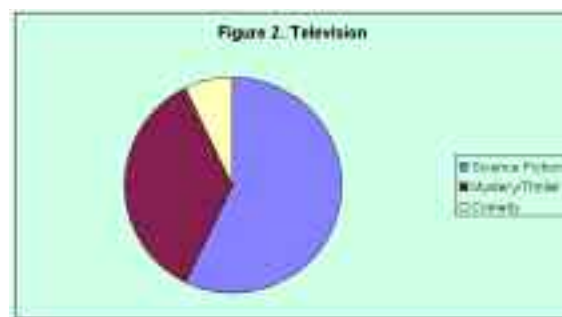


With titles such as *Demonia* and *The Rune Stone*, how could I not watch? In *Demonia*, a Canadian archaeological team in Sicily unleashes (accidentally of course) the vengeful ghosts of five demonic nuns who were murdered 500 years earlier. Closer to home, *The Rune Stone* followed a husband-and-wife team of archaeologists as they battled ancient Norse demons in western Pennsylvania. In *The Minion*, careless subway crews uncovered an ancient Celtic skeleton and key. None too soon, the Knights Templar dispatched Dolph Lundgren to save the relic and a beautiful archaeologist.

These are just a few variations on a theme: archaeologists unleash demons from hell onto the world. I wonder how many NSF grants contain the sentence, "My focus is unleashing unspeakable evil into the contemporary population"? Clearly, archaeology was being used consistently as a plot device to further along the basic theme of mayhem.

Among all the films, I found just one instance where the main character was an archaeologist and that fact had little or nothing to do with the plot. The film is *Baby Krishna* and is the story of a shy archaeologist who hits a cyclist on his way home from his high school reunion. The two forge a friendship on which the movie focuses. Two other films had secondary characters that were archaeologists, but were peripheral to the plot (*Tea with Mussolini* and *Friends*).

Another trend I identified was that most of the characters were based in museums, with some pulling double duty as academics/curators. Apparently those of us in private employ and who work for government agencies do not have the propensity to release Satan's spawn on an unsuspecting world. Go CRM! Kidding aside, this is not due to any negative bias that the filmmaking industry has toward museums and academics. Instead, it is a part of their perception that that is where archaeology is done. The lack of results for "historic preservation" and "cultural resources" is a reflection of this bias. For example, the unfortunate residents of New



York City could have been saved, not by Dolph, but rather the Section 106 process had NYC subway officials followed proper regulations.

### Archaeology and Television

As with movies, I researched archaeologists in scripted episodic television shows through the use of the IMDB and Amazon databases, and used the same keywords. I separated the shows that feature an archaeologist as the main character ( $n = 3$ ) from those that used archaeologists as single episode characters ( $n = 14$ ). I divided the episodes in the latter into three categories: Science Fiction, Mystery/Drama, and Comedy (Figure 2) with Science Fiction dominating. In these shows a greater variety of plots were evident. For instance, in an episode of *Murder She Wrote* titled *Day of the Dead*, James Coburn played chief archaeologist at the National Museum of Mexico, a suspect in the murder of an illegal antiquities dealer. Of course, Jessica (Angela Lansbury) just happens to be in Mexico City at the time and solves the murder. Nothing unworldly was unleashed, just the madness of Man.

Television programs use archaeologists in relatively more realistic roles. For instance, *Walker Texas Ranger* (episode *Tribe*) featured a beautiful archaeologist's spurned suitor as the fall guy for a developer seeking to sabotage a dig where he suspects there is oil. Note that I said "relatively more realistic" roles. Certainly the presence of an archaeological site does not preclude oil exploration, but the recognition that the site was *important*, worthy of study and preservation is a huge improvement from what I saw in oh-too-many horror movies. This is not to say that the ubiquitous museum archaeologist did not show up on our televisions. Two episodes each (yes two!) of *Baywatch* (*Sunday in Kaua'i* and *Deep Trouble*), and *MacGyver* (*Eye of Osiris* and *Legend of the Holy Rose*) featured museum/academia- based archaeologists.

Science fiction shows used archaeologists as well: five

episodes of *Star Trek: The Next Generation* (*Qpid*, *Time's Arrow*, *The Gambit*, *Masks*, and *The Chase*) and two of *Star Trek: Deep Space Nine* (*Q-less* and *Rapture*) centered on archaeologists and/or archaeological discoveries as did one of the series *Quantum Leap* (*Curse of Ptah-Hotep*). Amateur archaeologists were acknowledged in *Star Trek: The Next Generation* (*Qpid*) where we watch Captain Jean Luc Picard grapple with self-confidence issues before presenting a paper to professional archaeologists at an intergalactic conference. The Klingon laser gun aimed at the presenter lest he go over his allotted time is a strategy the SAA should consider.

I found that some current politically charged issues were also addressed in shows featuring archaeological characters. Perhaps the most well known is an episode of *King of the Hill* (*Arrowhead*) wherein Hank awakens to the sounds of an archaeological dig in his back yard. Displeased by this turn of events, Hank fights the "taking" of his yard. While the archaeologists are portrayed as myopic bumbling fools, I cannot complain as the show is about myopic bumbling fools. At least we were treated equally.


Three television shows featured an archaeologist as a main character. *Relic Hunter* starred Tea Carrea as a jet-setting treasure hunter calling herself an archaeologist. In the opening credits, she kicks some serious villain butt, tosses her hair, and declares, "I think I am going to like this job." Clearly she has never completed a National Register of Historic Places nomination form. This show only lasted one season, but another, *Stargate SG-1*, based on the movie *Stargate*, lasted nearly 11 seasons. One of the main characters is Daniel Jackson, an Egyptologist who travels the universe deciphering hieroglyphics and fighting bad aliens. But, at least he works for the government. Lastly, a short-lived series called *The Young Indiana Jones Chronicles* followed Indy on a variety of adventures, loosely related to archaeological endeavors.

### Summary

My research shows that archaeologists are primarily depicted as eccentric and dangerous (if they are male) or beautiful and imperiled (if they are female). Archaeology and archaeologists are used mostly as plot devices to explain impending doom, give film studios a reason to use CGI technology, and get rid of the leftover fake blood not used in the Halloween movie series. On the other hand, television provided a more evenhanded representation of our profession, branching out into the federal and private industry realms of 20<sup>th</sup> century archaeology.

The question is, should the depiction of archaeologists on

the big screen concern us? I think not. Movies in the 90's also gave us *Armageddon* (an asteroid hits earth!), *Deep Impact* (another asteroid hits earth!), *Anaconda* (huge snakes eat entire villages!), and *Congo* (the search for a lost city of diamonds!). Fantastic stories, unbelievable plots, and scary monsters will always be a part of the movies. I consider escapism a valid, enjoyable pastime. The worldwide prominence of terrorism and genocide, political shenanigans, and school shootings have the film industry allowing us to feel the angst of an uncertain world through scenarios that we know could never happen. Because on the whole, I think the public knows that an archaeologist would never really unleash an evil, bloodthirsty cannibalistic demon from ancient times to wipe out all of humanity.



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# MEDIA RELATIONS: A NEW MILLENNIUM

Shereen Lerner

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A new century brought with it many changes to our world and how we shaped our perspectives. The media became more important with regard to gaining information and viewed issues, topics, and beliefs. In this paper, we will look at what this most recent decade brought to archaeology and how it was portrayed in the media.

First, let's examine what happened during the decade. There were a number of events that transformed the world. These events also affected how movies and how the media presented topics.

## 2000-2009 Sampling of Events that Transformed the World

Y2K	9/11
Terrorism	Mad Cow Disease
The Euro	War in Iraq Begins
Sarah Palin	Challenges to Evolution
Election of Barack Obama	"Mission Accomplished"
Mortgage Crisis	Virginia Tech Shootings
Putin Elected in Russia	
Department of Homeland Security Established	
Space Shuttle Columbia Disaster	

## Technology and the Media

Wikipedia (2001)	X-Box
Enron	The Osbourns
Final Matrix Movie	Final Lord of the Rings Movie
Final Harry Potter Movie	Final Indiana Jones Movie
Final Lara Croft Movie	Final Mummy Movie
iPhone	

Many of the events that occurred during this decade were integrated into the way archaeology and anthropology were portrayed. We find archaeology in a variety of mediums including movies, television (both educational and popular), and the news (such as newspapers, magazines, and the Internet).

## Internet

One of the biggest challenges for archaeologists in this decade has been an increased use by the public and, particu-

larly students, of the Internet rather than primary sources including books and scientific journal articles. In particular, web sites such as Wikipedia have been considered factual despite a lack of contextual data to support its information. In the early part of the decade, archaeologists, and science in general, combated misinformation that was included on the Wikipedia web site. By the end of the decade, due to changes in policy at Wikipedia, some misinformation has been removed, and information that is unsubstantiated is often identified. There is an increased awareness by the public and students that additional sources need to be examined.

One interesting question to consider is how the Internet has affected the public's ability to learn about the past. In a positive way, the Internet has expanded the public's knowledge about the past through increased avenues of information. For example, the Archaeology Channel, *Archaeology*, *Science Daily*, *Archaeology*, *National Geographic*, ArchNet, the Society for American Archaeology, the Society for Historical Archaeology, archaeological fieldwork sites, and numerous university and college web sites that include educational information were previously unavailable in the past except to subscribers. Thus, archaeology is more available to the public than ever before. People can access information that is current as well as watch videos and slide shows of recent archaeological finds. Videos, both documentary, news clips, and popular, provide the public with an opportunity to learn more about the past than ever before. A Google entry of "archaeology" provides 34,000,000 results. A Google entry of "archaeology videos" provides 1, 580,000 results. A good question to consider is whether, despite this greater access, misinformation is rampant or is the public gaining a greater appreciation of the past through accurate scientific findings and the availability of more information on the Internet.

To take this a step further, the media, through the Internet, has created its "Top Ten" list of archaeological discoveries. Of course, this list may vary depending on the web site. *Nation-*



Figure 1: Wordle from the Discovery Channel.

*al Geographic* lists their top ten based on the number of “views” on their web site. *Archaeology* lists their top ten based on those finds they believe made a significant impact on the field—ones that will be talked about for decades. Here is a comparison for 2007 of those selected by *Archaeology* versus *National Geographic*.

## Archaeology

<http://www.archaeology.org/0801/topten/>  
 Solar Observatory at Chankillo, Peru  
 Nebo-Sarsekim Cuneiform Tablet  
 New Dates for Clovis Sites  
 Early Squash Seeds, Peru  
 Ancient Chimpanzee Tool Use  
 Urbanization at Tell Brak, Syria  
 Lismullin Henge, Tara, Ireland  
 Polynesian Chickens in Chile  
 Homo habilis and Homo erectus  
 Greater Angkor, Cambodia

**National Geographic**

<http://news.nationalgeographic.com/news/2007/12/071220-archaeology.html>

Ancient "Salt Cured" Man Found in Iranian Mine

"Unusual" Tomb of Egyptian Courtier Found

Photo Gallery: Frozen Inca Mummy Goes on Display

Photo in the News: Skeleton "Valentines" Won't be Parted

Japan's Ancient Underwater "Pyramid" Mystifies Scholars

Sacred Cave of Rome's Founders Found, Scientists Say

Jesus' Tomb Found in Israel, Filmmakers Claim

Egypt's Female Pharaoh Revealed by Chipped Tooth, Experts Say

Stonehenge Settlement Found: Builders' Homes, "Cult Houses"

Mass Plague Graves Found on Venice "Quarantine" Island

## Movies and Television

During this decade television produced several archaeology-based series, some educational with a twist (e.g., *Digging for Truth*, *Time Team*, *Meet the Ancestor*, and *Bone Detectives*),

and others as pure fiction (Bones). Regardless of whether shows had an educational focus, archaeology continued to be portrayed as a sexy, exciting profession with mystery and intrigue. Carrying a gun or a whip, being able to fight “bad guys,” scaling up steep cliffs, or swimming in dangerous waters was often included as part of the show. Despite years of trying to educate the public about archaeology, there remains the question as to whether these shows are more accurate than in the past.

What attracts the public to shows that highlight archaeology? A review of the title of shows produced by National Geographic, the Discovery Channel, and the History Channel discovered that certain words were more commonly used than others in an effort to attract viewers. A wordle (wordle.com) was created using the names of shows for the decade and produced the results Figures 1-3.

What is clear in looking at the titles of shows from these three sources is that they use words that will attract viewers. The most common words used were: Lost, Secrets, Egypt, Pyramids, Mummies, Ancient, Empire, History, King, and Maya. Despite many years of viewing shows about Egypt, interest continues as is evident by the titles of the shows on television during this decade.

This decade saw a return of Indiana Jones, the Mummy, and Lara Croft to the big screen for their (hopefully) final episodes. It is interesting to note that Indiana Jones has been around since 1981, and has become part of our culture to such an extent that the television series “Castle” recently (2010) aired an episode that focused on a mysterious Mayan grave and included images of Indiana Jones (the protagonist



Figure 2: Wordle from the History Channel.



Figure 3: Wordle from the National Geographic Channel.

wears a fedora of the style worn by Indiana Jones and talks about wearing a gun and/or whip).

In addition to archaeology as the centerpiece of television shows and movies, it also appears as a subplot. For example, in the movie *Panama* (2008) there is a priceless Egyptian statuette and a shady archaeologist; *The Myth* (with Jackie Chan as an archaeologist) (2005); *Demons at the Door* (2004) focuses on the “greatest archaeological find of all time”; *Broce’liande* (2002) an archaeological student discovers a mythical monster; *A Genesis Found* (2009) an archaeologist working on an excavation at Moundville found an anomalous skeleton, neither animal or man that may be proof of extraterrestrials; and so on. Once again, we see archaeology and archaeologists depicted as involved in mysterious and life-threatening activities.

### Examples of Movies and Television Shows with Archaeology Sub-Plot

- *Panama*-2009
- *Demons at the Door*-2004
- *Babylon 5*-2002
- *Broce'liande*-2002
- *A Genesis Found*-2009
- *Unearthed*-2007
- *Alien vs Predator*-2004
- *Prisoners of the Sun*-2010
- *The Myth*-2005
- Bones*-all episodes
- *NCIS*-Chained (2004)
- *Joey*-Joey and the Bachelor (2005)
- *Taken*-Acid Tests (2002)
- *DaVinci's Inquest*-several episodes (2001/2002)
- *Relic Hunter*-Pandora' Box (2002)
- *Dalziel and Pascoe*-The Dig (2005)
- *Les nouvelles aventures de Lucky Luke* (2001 TV series)
- *Simpsons*-Evolution (Monkey Suit)

## Summary

Despite all our best efforts, we have not moved on from Indiana Jones; in reality those who produce television shows and movies realized they needed mystery and action to attract viewers. So in 2005 we have a movie with Jackie Chan as an archaeologist trying to solve mysteries from the Qin Dynasty and in 2010 we have Nathan Fillion as Richard Castle (television) trying to be Indiana Jones. Even our “documentary series” (*Digging for Truth*, *Bone Detectives*, etc) try to create images of the unknown via the title of the shows and the way the leads are presented. An underlying question is whether the documentaries are more accurate in the past and it does appear that a bit more actual scientific data is being infused in the television shows (not movies), along with the exotic.

If we revisit the initial question: "What did this most recent decade bring to archaeology and how was it portrayed in the media?" we realize that there is not much change with regard to media portrayals of archaeology from previous decades. Despite archaeologists continued attempts to educate the public and media on the reality of archaeological methods, theory, and results, it is still often portrayed in a manner that suggests mystery and intrigue. The Internet has made archaeology more available to the public; there is an increased awareness of the "latest find" and additional opportunities to learn about scientific study. In reality, the Internet is likely our best hope of educating the public about "real archaeology" by using a variety of methods currently available as well as bringing new ideas to the forefront (e.g., using online interactive activities such as <http://www.ancientegypt.co.uk/menu.html> or simply reporting the news).

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# THE FUTURE OF ARCHAEOLOGY

## A MEDIA PROPHECY

**Zachary Nelson**

*Zachary Nelson is a Senior Archaeologist at ENTRIX, Inc.*

**P**rophecy is not generally the realm of archaeology. Our views are firmly backward in time, yet an occasional peak into the future would not be totally amiss. The next decade will see plenty of archaeological excitement in the world. However, a few pitfalls will plague us. Let's turn the clock forward as we check out the next decade and beyond.

First, Harrison Ford claims that he will not don the hat and whip again. This sad news means that "Indiana Jones and the Fate of Atlantis" will not actually be seen on the big screen, just in video games and on YouTube, of course. Provided that the world does not end with the 2012 solstice as the ancient Maya did NOT predict, media coverage in the upcoming decade will provide some interesting stories as the field of archaeology concentrates on technology, CRM archaeology, university archaeology, and science fiction.

### Technology

Space archaeology will really begin in the next decade. The lunar sites are entering into the historic register, with the USSR's Lunar 2 in 1959 through to Apollo 11 in 1969. Doubtless they qualify for the National Register of Historic Places and should become World Heritage Sites. They will need archaeologists to fully record the sites. In addition to the moon sites, satellites are also a historic resource. Unfortunately, it is far easier to burn them up in re-entry than lob them onto or into a museum.

The same technology that guides satellites in orbit will continue to drive archaeologists. GPS enabled data is rapidly becoming the norm for reconnaissance and placing excavations into 4-dimensional space. Satellite imagery of earth will also continue to advance. Deep sand and canopies will gradually yield their secrets through better methods of propagating waves and better interpretive software. The newly developed "saser" or sound laser may be able to detect anomalies at great depths and under mounds. Thus, new research in

sound and light technology will help unravel the secrets of the pyramids by bouncing wave-lengths through and under them. This will lead to claims that Nostradamus predicted "Mound Penetrating Radar" in 1555. (It was actually in 1559.)

Nondestructive C-14 dating will allow another moment of fame for those confirming the Shroud of Turin's medieval manufacture date. Once a hand-held dating prototype is developed, rapid dating can be done in the field, thereby aiding immediate analysis of materials. Other advances in technology will help seafloor archaeology. The colonization of the world will become much more complex as subsurface sites are found and investigated.

Virtual Reconstructions will have the most impressive growth in archaeological media in the next decade. Four-dimensional environmental reconstructions will become valuable tools in archaeological reconstructions and will make webpages shine. The video game generation can relate to such reconstructions and will be drawn like moths to the bright colors. Finally, ceramicists will soon make remarkable claims about prehistoric weights and measures by virtually reconstructing pots and looking for common repeated measurements. A major eureka moment will occur with the realization that horizontal banding may indicate measured volumes. Combined with residue analysis, pots will be used for much more than just seriation. This will bring in a revolution of understanding ancient societies! And it will put you in the news for your 15 minutes of fame.

### CRM Archaeology

While technology aids archaeological methods, it does not provide jobs. Most archaeologists are employed in the private sector as "cultural resource managers." More archaeologists will be needed for this growing field. Historical archaeology is the next big wave. The legislative rules that govern archaeology define anything over 50 years as historic. Thus, entire



subdivisions are historic, as are most buildings and roads found on U.S.G.S. Topographic maps. However, soon there will be mocking newspaper articles about archaeologists. The chief reason will be “Beer Can Archaeology.” This *Bud* will be recorded by you. Before beer cans and pull tabs fill museums, it may be wise to proactively define exclusions to archaeological surveys or redefine the meaning of sites and isolates. Some states are proactive about their historic recording standards. I suggest that you check out Wyoming’s State Historic Preservation Office practices as a good example of balancing important historical information recording without making archaeology trivial (<http://wyoshpo.state.wy.us>).

## University Archaeology

In the university setting, the higher general population will increase undergraduate enrollment. Unfortunately, this will not automatically mean more university funding. In fact, education monies will be cut by 1 percent each year at state-funded institutions. States are always in a budget crunch, and recession-like policies will stay in place over the next decade. Archaeologists will need to stick out to attract funding and students. I suggest they become more visible to the public. Talk to reporters about your work. Make it interesting. It’s far more interesting than business classes. Your institutional future may depend on making your undergraduate enrollment larger.

One way of making archaeology interesting is to move away from talking about artifacts to discussing the humans that made them. I predict that “Archaeology of the Individual” will become vogue. The history and archaeology of important—and even common—individuals will become big. Dig up Abraham Lincoln, explore his home, his DNA, and every element of his life. The melding of archaeology, history, geography, and environmental studies coupled with the name appeal of historic individuals will provide grant monies for historical projects and boost your individual appeal to the Dean.

## Government-Funded Archaeology

The government always has both a surplus and a deficit. This means funding will always be hit or miss. Now is the time to make friends with hard science types. Climate change and ancient societies will continue to attract interest. People are fascinated by the interplay of science and ancient death. However, to get the big funding, archaeology needs to drink from the fire hose of a consortium of data interwoven among all of the hard sciences. Archaeologists lucky enough to be working on these subjects will find federal funding. Likewise, collapsed societies will continue to be on the forefront

of media attention until the Apocalypse actually arrives.

In exchange for not digging up sites, funding will be available for museum collections. Museum collections are not always well-documented, but are readily available. Mine the collections and get a small hit of popularity. No one will ever find Troy again, but the collection can always be re-examined for Achilles’ bones.

## Science Fiction and Archaeology

Don’t forget science fiction and its interplay with archaeology. Today’s science fiction may yet come true. Space, satellites and moon sites are already historic, but once astronomers actually find (perhaps confirm in light of the fact that they just did) earth-like planets, then xenoarchaeology will become a media focus and become university fodder. While space alien culture is probably less *Alien* than we imagine, the principles of archaeological practice can be taught using examples from science fiction or fantasy.

Actually, many science fiction and fantasy books revolve around archaeological finds. A willingness to tap into these genres from an anthropological perspective may reach students who might otherwise never bother to attend an anthropological class. A course on Tolkien’s *Lord of the Rings* could explain archaeological and anthropological concepts. Mining his books and the very popular *World of Warcraft* could bring insight. After all, science fiction is just anthropology in a parallel dimension and universities are broad enough to include multiple universes.

## Conclusions

Archaeologists are interesting and have mystique. The challenge of the next decade, and beyond, is to harness glamour. Archaeology is the past, but you are the face of the present. Media, in all its forms, exists to help you channel the past into the present. The future of archaeology begins in the present. It may just be a few years until archaeologists will add space suits to their dig kits: Have Spacesuit, Will Travel and Dig!

SOCIETY FOR AMERICAN ARCHAEOLOGY

BALANCE SHEETS

	December 31,	
	2009	2008
<u>ASSETS</u>		
CURRENT ASSETS		
Cash and Cash Equivalents	\$ 2,096,748	\$ 1,928,361
Accounts Receivable, Net	8,856	-
Pledges Receivable, Current Portion	22,295	34,030
Accrued Interest Receivable	1,218	11,413
Prepaid Expenses, Current Portion	42,401	42,518
Total Current Assets	<u>2,171,518</u>	<u>2,016,322</u>
PREPAID EXPENSES, Net of Current Portion	3,378	2,160
PLEDGES RECEIVABLE, Net of Current Portion	15,390	42,680
INVESTMENTS	2,055,210	1,605,728
PROPERTY AND EQUIPMENT, Net	44,309	69,206
DEPOSITS	<u>6,076</u>	<u>6,076</u>
	<u>\$ 4,295,881</u>	<u>\$ 3,742,172</u>
<u>LIABILITIES AND NET ASSETS</u>		
CURRENT LIABILITIES		
Accounts Payable and Accrued Expenses	\$ 65,169	\$ 43,900
Deferred Revenue		
Membership Dues, Current Portion	497,353	397,274
Subscriptions	156,861	168,746
Meetings and Other	345,528	285,406
Total Deferred Revenue	<u>999,742</u>	<u>851,426</u>
Total Current Liabilities	<u>1,064,911</u>	<u>895,326</u>
DEFERRED MEMBERSHIP DUES, Net of Current Portion	<u>33,954</u>	<u>36,233</u>
Total Liabilities	<u>1,098,865</u>	<u>931,559</u>
NET ASSETS		
Unrestricted		
Undesignated	1,630,232	1,601,616
Board-Designated	694,255	489,278
Unrealized Loss on Temporarily Restricted Net Assets	-	(7,049)
	<u>2,324,487</u>	<u>2,083,845</u>
Temporarily Restricted	186,698	83,448
Permanently Restricted	685,831	643,320
Total Net Assets	<u>3,197,016</u>	<u>2,810,613</u>
	<u>\$ 4,295,881</u>	<u>\$ 3,742,172</u>

SOCIETY FOR AMERICAN ARCHAEOLOGY

STATEMENTS OF ACTIVITIES AND CHANGE IN NET ASSETS

	Year Ended December 31,				
	2009		2008		
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	
<b>REVENUE AND SUPPORT</b>					
Membership Dues	\$ 679,186	\$ -	\$ -	\$ 679,186	\$ 750,626
Annual Meeting	475,790	-	-	475,790	596,819
Publications	289,964	-	-	289,964	277,250
Public Programs and Services	16,168	-	-	16,168	11,079
Organization and Administration	268,273	133,444	42,511	444,228	(213,172)
Member Programs and Services	7,654	-	-	7,654	8,389
Awards	2,250	-	-	2,250	2,000
Net Assets Released from Restriction -					
Public Programs and Services	30,194	(30,194)	-	-	-
Total Revenue and Support	<u>1,769,479</u>	<u>103,250</u>	<u>42,511</u>	<u>1,915,240</u>	<u>1,432,991</u>
<b>EXPENSES</b>					
Program Services					
Membership	94,168	-	-	94,168	142,085
Annual Meeting	316,471	-	-	316,471	299,657
Publications	355,389	-	-	355,389	340,240
Public Programs and Services	239,148	-	-	239,148	221,429
Member Programs and Services	100,456	-	-	100,456	158,552
Awards	11,594	-	-	11,594	12,049
	<u>1,117,226</u>	<u>-</u>	<u>-</u>	<u>1,117,226</u>	<u>1,174,012</u>
Supporting Services					
Management and General	390,418	-	-	390,418	370,018
Membership Development	21,193	-	-	21,193	20,945
	<u>411,611</u>	<u>-</u>	<u>-</u>	<u>411,611</u>	<u>390,963</u>
Total Expenses	<u>1,528,837</u>	<u>-</u>	<u>-</u>	<u>1,528,837</u>	<u>1,564,975</u>
<b>CHANGE IN NET ASSETS BEFORE</b>					
<b>ADOPTION OF FSP 117-1</b>					
Adoption of FSP 117-1	240,642	103,250	42,511	386,403	(133,501)
	-	-	-	-	101,671
<b>CHANGE IN NET ASSETS</b>					
	<u>240,642</u>	<u>103,250</u>	<u>42,511</u>	<u>386,403</u>	<u>(31,830)</u>
<b>NET ASSETS, Beginning of Year</b>	<u>2,063,845</u>	<u>83,448</u>	<u>643,320</u>	<u>2,810,613</u>	<u>2,942,597</u>
<b>NET ASSETS, End of Year</b>	<u>\$ 2,324,487</u>	<u>\$ 186,698</u>	<u>\$ 685,831</u>	<u>\$ 3,197,016</u>	<u>\$ 2,810,613</u>



## POSITIONS OPEN

**POSITION: ASSISTANT PROFESSOR IN CHINESE ARCHAEOLOGY**

**LOCATION: PHILADELPHIA, PA**

The School of Arts and Sciences at the University of Pennsylvania and the Penn Museum of Archaeology and Anthropology invite applications for a tenure-track Assistant Professor position in Chinese archaeology. The appointment will be either in the Anthropology or the East Asian Languages and Civilizations (EALC) Department, with a parallel appointment as Assistant Curator in the Asian Section of the Penn Museum. The successful candidate will teach two courses a year and will participate in the activities of the Museum's Asian Section. Candidates with active fieldwork projects in China are strongly encouraged to apply. Candidates should apply at: [facultysearches.provost.upenn.edu/applicants/Central?quickfind=50826](http://facultysearches.provost.upenn.edu/applicants/Central?quickfind=50826). Please include a letter of application outlining experience and qualifications; evidence of teaching experience; a current academic vita; the names, addresses, telephone numbers, and email addresses of four professionals who can supply written references. Review of applications will begin in November and will continue until the position is filled. The University of Pennsylvania is an equal opportunity/affirmative action employer. Women and minority candidates are encouraged to apply.

**POSITION: ENTRY-LEVEL TENURE-TRACK POSITION IN ARCHAEOLOGY**

**LOCATION: TUSCALOOSA, ALABAMA**

The Department of Anthropology of the University of Alabama invites applications for an entry-level tenure-track position in archaeology, to begin August 2011. Ph.D. is required at the time of appointment. We seek an archaeologist with research interests in Latin America, broadly conceived to include the Caribbean, who will contribute to our doctoral program in the archaeology of

complex societies in the Americas. The successful candidate will be expected to teach undergraduate and graduate courses, mentor graduate students, and pursue an active program of field research supported by extramural funds, involving students in the research, and leading to publications contributing to theoretical and comparative literature in anthropological archaeology. Evidence of teaching excellence is required. Review of applications will begin October 25, 2010, and will continue until the position is filled. The successful candidate must have a Ph.D. in anthropology with demonstrated expertise in the archaeology of complex societies in the New World. He/she also should have expertise that complements that of the current faculty, including strong qualifications in advanced quantitative methods and Geographical Information Systems (GIS). The Department of Anthropology takes a traditional four-field approach to the BA, MA, and Ph.D. degrees, emphasizing two areas of specialization that crosscut subdisciplines: the anthropology of health and the archaeology of complex societies in the Americas. The University of Alabama owns and has research access to Moundville Archaeological Park, a major Mississippian ceremonial center. To apply, go to <http://facultyjobs.ua.edu> and complete the online application. Attach a letter of application and curriculum vitae. Send names and contact information of three references, examples of publications (PDF format is desirable), and teaching evaluations, if available directly to Lisa LeCount ([llecount@as.ua.edu](mailto:llecount@as.ua.edu)), chair, archaeology search committee, Department of Anthropology, Box 870210, University of Alabama, Tuscaloosa, AL, 35487. The University of Alabama is an Equal Opportunity Affirmative Action Employer. Women and minorities are encouraged to apply.

**POSITION: INSTRUCTOR OF ARCHAEOLOGY AND BIOLOGICAL ANTHROPOLOGY**

**LOCATION: LEXINGTON, KENTUCKY**

The Department of Anthropology at the University of Kentucky invites applications for a non-tenure-track faculty appointment at the rank of Lecturer beginning fall semester, 2011. This is a renewable two-year appointment with the possibility of eventual three-year rolling contracts. We seek an anthropologically trained archaeologist, bioarchaeologist, or biological anthropologist to teach introductory and general education classes as well as intermediate undergraduate courses in his or her area of expertise. Teaching load is 3/3 with opportunities for professional development, service, or additional teaching. The ideal candidate will have significant teaching experience in archaeology and biological anthropology and demonstrate a strong commitment to and enthusiasm for teaching undergraduate students. Ph.D. required at the beginning of appointment. The University of Kentucky is an Affirmative Action/Equal Opportunity University that values diversity and is located in an increasingly diverse geographical region. It is committed to becoming one of the top public institutions in the country. Women, persons with disabilities, and members of other underrepresented groups are encouraged to apply. For consideration, please mail letter of interest detailing teaching interests and research experience, curriculum vitae, writing sample, evidence of teaching excellence, and names and contact information for three references to Chair, Lecturer Search Committee, Department of Anthropology, 211 Lafferty Hall, University of Kentucky, Lexington, KY 40506-0024. Application materials MUST be received by December 1, 2010.





## POSITIONS OPEN

**POSITION: VISITING SCHOLAR, CENTER FOR  
ARCHAEOLOGICAL INVESTIGATIONS**

**LOCATION: CARBONDALE, ILLINOIS**

Southern Illinois University Carbondale, Center for Archaeological Investigations, seeks its 2011-2012 Visiting Scholar (VS). The VS organizes and conducts an archaeological conference at SIUC, resulting in an edited volume of selected papers. VS assembles and edits conference volume while in residence. The successful candidate is also expected to pursue his/her research and teach one seminar in his/her specialty. 11-month term appointment as a Visiting Scholar. Qualifications: Ph.D. in Anthropology or related discipline with specialization in archaeology. Degree must be completed by August 16, 2011. VS selected on the basis of a 5-page proposal outlining the nature and structure of the conference and on the strength of vita and references. Pre-application inquiries recommended. Closing date: Received or postmarked by midnight on February 1, 2011. Send letter, vitae, list of references, and proposal to: Dr. Heather Lapham, CAI, Faner 3479 - Mail Code 4527, Southern Illinois University Carbondale, 1000 Faner Drive, Carbondale, IL 62901; Tel: (618) 453-5031; E-mail: hlapham@siu.edu. SIUC is an affirmative action/equal opportunity employer that strives to enhance its ability to develop a diverse faculty and staff and to increase its potential to serve a diverse student population. All applications are welcomed and encouraged and will receive consideration.

**POSITION: ASSISTANT PROFESSOR**

**LOCATION: BERKELEY, CALIFORNIA**

The Department of Anthropology at the University of California, Berkeley seeks an Assistant Professor for a tenure-track appointment in environmental archaeology. The successful applicant will have expertise in research and teaching that explores the relationships between

humans and their environments, and may include topics ranging from social landscape studies to the analysis of organic or inorganic environmental traces left behind by human habitation and activity. Successful applicants will bring strengths that would complement those of the existing faculty. The archaeology program at UC Berkeley has a strong commitment to engage with descendant communities and issues of contemporary archaeology. Active participation in both undergraduate and Ph.D. programs, teaching both introductory and upper division courses, including a laboratory course, as well as graduate seminars is expected. Applicants should have a Ph.D. in hand and should send a succinct cover letter describing your research and teaching experience. Applications may be made by letter or electronically and should include a current curriculum vitae, names and full contact information for three references, and evidence of teaching effectiveness. Berkeley is committed to addressing the family needs of faculty, including dual career couples and single parents. The department seeks candidates whose research, teaching, or service has prepared them to contribute to our commitment to diversity and inclusion in higher education. Review of applications will begin 9 November, 2010. Deadline for submitting applications is January 1, 2011. Applications should be uploaded at: <http://ls-ourunit.berkeley.edu:80/sReg.php?i=457>, or mailed to: Terrence Deacon, Department Chair, C/O Cecilia Mafnas, Department of Anthropology, 232 Kroeber Hall, University of California at Berkeley, Berkeley, CA 94720-3710. The University of California is an Affirmative Action, Equal Opportunity Employer.

**POSITION: GIS/ELECTRONIC MAPPING SPECIALIST**

**LOCATION: CINCINNATI, OHIO**

Gray & Pape, Inc., has a position open for a GIS/Electronic Mapping Specialist in their Cincinnati, Ohio, office. Gray & Pape is a nationally recognized cultural resources management firm providing archaeology, historic preservation, and planning services. Gray & Pape has offices in Bloomington, Indiana; Rabbit Hash, Kentucky; Richmond, Virginia; and Providence, Rhode Island. The Geographic Information Systems/Electronic Mapping Specialist is responsible for providing GIS support for company projects; and the research, development, and implementation of GIS/EM technology for the company. Additional duties include: data recording and mapping in the field; managing multiple projects simultaneously in a schedule-driven environment; maintenance of field-mapping equipment and electronic-mapping software; staying current in new GIS-related hardware and software; and training staff in the use of field-mapping technologies. Travel is required. B.A. Anthropology, Geography, or related field, plus 5 years experience in the application of GIS and graphics software for the presentation of data in CRM or equivalent projects. M.A. in Geography preferred. Gray & Pape, Inc., offers a competitive pay and benefits package. Send a current resume, three references from persons in the GIS field, and examples of relevant, recent GIS projects to Gray & Pape, Inc., 1318 Main Street, Cincinnati, Ohio, 45202. For further information please contact Madonna M. Ledford, Technical Services Manager, at [mledford@graypape.com](mailto:mledford@graypape.com). No phone calls, please. An Equal Opportunity Employer.



# CALENDAR

## 2011

### March 23–27

The Mesoamerica Center of the University of Texas at Austin is very excited to announce the 2011 Maya Meetings. Workshops will be held March 23-25, and the Symposium on March 26-27. Registration for the Symposium and Workshops Begins October 1, 2010. Information about the Maya Meetings ss Available at [www.utmaya.org](http://www.utmaya.org).

### March 25–26

The 53rd Caddo Conference will be held on 25 and 26 March 2011 in Fort Smith, Arkansas. Co-sponsors for the Conference are the Arkansas Archeological Survey and University of Arkansas-Fort Smith. Program Chairman is Arkansas Archeological Survey archeologist Dr. Mary Beth Trubitt who can be reached at [trubitm@hsu.edu](mailto:trubitm@hsu.edu), and PO Box H-7841-HSU, Arkadelphia, AR 71999-0001. Arrangements Coordinator is Dr. Ann M. Early, who can be reached at [amearly@uark.edu](mailto:amearly@uark.edu), and 2475 North Hatch Ave, Fayetteville, AR 72704. More information about local arrangements and activities will be posted in Fall 2010.

### March 30–April 3

The 76th Annual Meeting of the Society for American Archaeology. Sacramento, California. [www.saa.org](http://www.saa.org).

SHACKLEY, from page 20

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1995 Analysis of Silicate Rocks Using Field-Portable X-Ray Fluorescence Instrumentation Incorporating a Mercury (II) Iodide Detector: A Preliminary Assessment of Analytical Performance. *The Analyst* 120:1273–1278.
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- 2005 *Obsidian: Geology and Archaeology in the North American Southwest*. University of Arizona Press, Tucson.
- 2010a *X-Ray Fluorescence Spectrometry (XRF) in Geoarchaeology*. Springer, New York.
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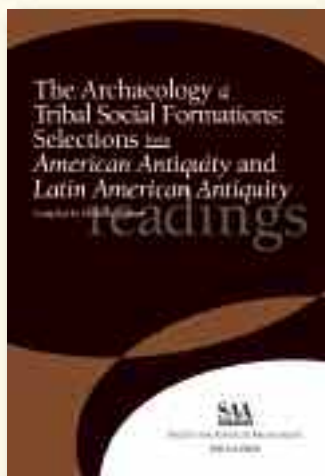
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- 2010 Crises and Solutions in American Archaeology. *The SAA Archaeological Record* 10(1): 37–38.
- Shugar, Aaron  
2010 Variation in Data Reported from Handheld XRF Analysis Resulting from Minor Alterations to Machine Calibration. Poster presented at the 38th International Symposium on Archaeometry, Tampa Bay, Florida.
- Speakman, Robert J., S. Colby Phillips, Victoria Florey, Nicole C. Little, and Javier G. Iñáñez  
2010 Approaches to Micro-XRF Analysis of Obsidian. Paper presented at the 38th International Symposium on Archaeometry, Tampa Bay, Florida.

#### Announcement: Needs Assessment Survey

Surveys were distributed to all SAA members on October 13, 2010 through a secure link sent to you by this email: [saasurvey@association-research.com](mailto:saasurvey@association-research.com). A postcard containing the link was mailed out to those members without a current email address on file with SAA. We do need your participation. Please complete the survey by the December 1, 2010 closing date. Thank you in advance for your time.

## READERS FROM THE SAA PRESS



*NEW! The Archaeology of Tribal Social Formations: Selections from American Antiquity and Latin American Antiquity.* Compiled by Michele Hegmon. 400 pp. 2010. ISBN 978-0-932839-38-1.  
Regular Price: ~~\$24.95~~ \$14.95  
SAA Member Discount Price: ~~\$19.95~~ \$9.95

### Also Available

*Archaeological Lithic Analysis: Readings from American Antiquity and Latin American Antiquity.* Compiled by George H. Odell. 432 pp. 2009. ISBN 0-932839-37-1. Regular Price: ~~\$24.95~~ \$14.95; SAA Member Discount Price: ~~\$19.95~~ \$9.95.

*Readings in Chronometric Analysis: Selections from American Antiquity and Latin American Antiquity, 1935-2006.* Compiled by Stephen E. Nash. 480 pp. 2009. ISBN 0-932839-36-3. Regular Price: ~~\$19.95~~ \$14.95; SAA Member Discount Price: ~~\$15.95~~ \$9.95.

*An Archaeological Perspective on Ritual, Religion, and Ideology from American Antiquity and Latin American Antiquity.* Compiled by Gordon F. M. Rakita and Jane Buikstra. 272 pp. 2008. ISBN 0-932839-35-5. Regular Price: ~~\$24.95~~ \$14.95; SAA Member Discount Price: ~~\$19.95~~ \$9.95.

*Readings in Late Pleistocene North America and Early Paleoindians: Selections from America Antiquity.* Compiled by Bruce B. Huckell and J. David Kilby. 312 pp. 2004. ISBN 0-932839-26-6. Regular Price: ~~\$19.95~~ \$14.95; SAA Member Discount Price: ~~\$15.95~~ \$9.95.

*Ceramics in Archaeology: Readings from American Antiquity, 1936-2002.* Compiled by Hector Neff. 384 pp. 2005. ISBN 0-932839-29-0. Regular Price: ~~\$19.95~~ \$14.95; SAA Member Discount Price: ~~\$15.95~~ \$9.95.

*Readings in American Archaeological Theory: Selections from American Antiquity 1962-2002.* Compiled by Garth Bawden. 292 pages. 2003. ISBN 0-932839-25-8. Regular Price: ~~\$22.95~~ \$14.95; SAA Member Discount Price: ~~\$17.95~~ \$9.95.

*Formation Theory in Archaeology.* Readings from *American Antiquity* and *Latin American Antiquity* compiled by Michael Shott. 352 pp. 2006. ISBN 0-932839-30-4. Regular Price: ~~\$24.95~~ \$14.95; SAA Member Discount Price: ~~\$19.95~~ \$9.95.

**TO ORDER, PLEASE CALL SAA AT 202-789-8200 OR ORDER ONLINE AT WWW.SAA.ORG**

## **SAA'S 76TH ANNUAL MEETING MARCH 30-APRIL 3, 2011**

The Annual Meeting section of SAAweb offers the latest information  
about SAA's upcoming 76th Annual Meeting in Sacramento.

**[www.saa.org/annualmeeting](http://www.saa.org/annualmeeting)**

You'll find information about: Hotels, Transportation, Exhibitors, and  
much more!

Advance Registration will also be available on SAAweb in December, and  
the Preliminary Program will be available on SAAweb in Mid December,  
and will be mailed on December 27, 2010.

**Come Join us in Sacramento!**