A Few Highlights from the SAA Annual Meeting in Milwaukee. . .

Opening Session: Thinking and Drinking Beer: Archaeological Perspectives
Organizer & Chair: B. Bowser
Date and Location: Wednesday, April 9, 7:30–9:30 pm in the Midwest Express Center
The signature beverage of archaeologists is also an important analytical medium for investigating the social and political dynamics of complex societies worldwide. To prepare for four days of scholarly discourse in the town that made beer famous, be sure to attend the Opening Session. It will quench your intellectual thirst.

Special Session: World Trade Center Archaeology: Lessons for the Future
Co-chairs: Richard A. Gould & Katharine Woodhouse-Beyer
Date and Location: Friday, April 11, 9:00–11:00 am in the Monarch Ballroom in the Hilton Milwaukee City Center

Some of the issues the session will discuss are:
• How can archaeology help bring a measure of comfort to relatives and acquaintances of victims lost in a disaster?
• How should archaeologists persuade the authorities ahead of time to ensure timely invitations to the disaster scene?
• How can we apply archaeological skills effectively to disaster scenes?
• What are the major health and safety issues for volunteers?
• What special training is required? Where do you get this training?
• How can your team maintain its focus and energy between major events?

Special Session: Resolving the Curation Crisis: Needs and Opportunities
Co-organizers and Co-chairs: S. Terry Childs, Mari Lyn Salvador, and Don D. Fowler
Location and Time: Thursday, April 10, 9:00–12:00 am in the Hilton Milwaukee City Center
The curation of archaeological materials is widely perceived as being in a crisis mode in the U.S. Various professional archaeological and related organizations have been discussing and studying the problems over recent years. The present forum brings together representatives of these organizations, and all interested members of SAA, to pool information and discuss alternative solutions. A goal of the forum is to formulate a statement of needs and opportunities that can be present-ed to Congress, federal and state agencies, Native American tribes, foundations, museums and existing curation facilities and other interested groups that can help provide funding and organizational leadership to resolve the crisis.
The Forum is sponsored by the SAA Curation Committee, the Council for Museum Anthropology, the Archaeology Division of the American Anthropological Association, and the Society for Historical Archaeology.

See You in Milwaukee!

the SAAarchaeological record

The Magazine of the Society for American Archaeology

EDITOR'S CORNER

John Kantner

John Kantner is an assistant professor of anthropology at Georgia State University.

This issue of *The SAA Archaeological Record* is dedicated to the topic of "Publishing
Trends in Archaeology." This theme emerged because I coincidentally received a few
articles that consider archaeological publishing from different perspectives. And sev-
eral other archaeologists were eager to contribute their own perspectives on the topic.
Together, the articles in this issue consider publishing for the public, publishing for
our peers, traditional print publishing, and electronic publishing. Included is an arti-
cle about SAA's new journal, *e-tiquity,* as well as a guide for assembling imagery for
web publications. Throughout the articles, two themes seem especially predominant:

Publishing for the Public

"Is Atlantis a *real* legend?" I overheard this during a recent extended-family trip to the
mega-resort of Atlantis, located not far from Nassau. At the time, I was wandering
through "The Dig," an attraction featuring underwater "ruins" constructed in an enor-
mous aquarium. Hammerhead sharks and manta rays swim among the ruins, and vis-
itors can walk through the archaeologist's study as well as many of the "excavated"
chambers.

Not one word of text can be found anywhere . . . except for on the reams of data sheets
found in the stereotyped "archaeologist's study."

As the designers of "The Dig" knew, what interests the public are *stories,* both about
the past and about archaeology as a discipline—they want to see it, feel it, imagine it.
And people like to hear about archaeological mysteries as much as they are interested
in what we do know. That's the appeal of "The Dig," and several of the contributions to
this issue highlight our need to recognize this when we publish for the public. As Peter
Young points out in his article, "writing for public consumption can be demanding and
time-consuming. . . . But those of you who do find the time provide an incalculable
service to the profession: you humanize it."

Publishing for our Peers

Although the voluminous descriptive works that archaeologists tend to produce are
often criticized for their dry prose and pages of tables, we all recognize the ethical
responsibility to make our data accessible to our peers. Fulfilling this responsibility is
costly in time and money, and the resulting reports end up hidden away in state His-
toric Preservation offices or in a few specialized libraries, often inaccessible to the
majority of researchers. As articles by Kristin Kuckelman and Anne Wolley Vawser
note, publishing data reports online can, in the long run, make reports widely available
and save money and time that are better directed toward public outreach or additional
research.

Contributions by Jelmer Eerkens and Karen Harry and her colleagues look at archaeo-
logical publishing from a different perspective: they consider what our publications can
tell us about our discipline. Eerkens explores trends in the representation of different
geographical regions in *American Antiquity* articles and identifies several factors that
influence how frequently the archaeology of a region appears among the journal's
pages. Karen Harry, Jodi Dalton, and Mark C. Slaughter examine the genders of *Amer-*

LETTER TO THE EDITOR

The undersigned, archaeologists and other scholars who have lived and worked in the Middle East, wish to go on record as opposing the current threat by the Bush administration to wage war against Iraq. Iraq poses no direct military threat to the U.S., and the likelihood that it would attack its neighbors is far greater in the event of a U.S. attack. War, regardless of the means by which it is waged, will cost the lives of innocent civilians. U.S. military action poses the gravest consequences, not only for the people of Iraq, but for the entire Middle East.

Signatories (institutional affiliations are included for identification purposes only):

Susan Pollock (SUNY at Binghamton)
Reinhard Bernbeck (SUNY at Binghamton)
Elizabeth Stone (SUNY at Stony Brook)
Philip Kohl (Wellesley College)
Virginia Badler (University of Toronto)
Vincent Pigott (University College London)
Lee Horne (University of Pennsylvania)
Glenn Schwartz (Johns Hopkins University)
Maria Ellis (University of Pennsylvania)
Elif Denel (Bryn Mawr College)
Peter Magee (Bryn Mawr College)
Julia Frane (independent scholar)
Paul Zimansky (Boston University)
Naomi Miller (University of Pennsylvania)

Irene Winter (Harvard University)
Harvey Weiss (Yale University)
Tony Wilkinson (University of Chicago)
Louis Levine (Museum of Jewish Heritage)
Frank Hole (Yale University)
Meredith Chesson (University of Notre Dame)
Richard Ellis (Bryn Mawr College)
Martha Sharp Joukowsky (Brown University)
Carol Kramer (University of Arizona)
Christopher Edens (American Institute for Yemeni Studies)
Zainab Bahrani (Columbia University)
Norman Yoffee (University of Michigan)
Michael Roaf (Universität München)
Michelle Marcus (The Dalton School)
Elizabeth Carter (UCLA)
Stephan Kroll (Universität München)
Rita Wright (NYU)
Marian Feldman (UC at Berkeley)
Timothy Matney (University of Akron)
Hans Nissen (Freie Universität Berlin)
Charles E. Jones (University of Chicago)
Yorke Rowan (Pennsylvania State University, Erie)
Clemens Reichel (University of Chicago)
Elsie Holmes Peck (Detroit Institute of Arts)
William H. Peck (Detroit Institute of Arts)
Gary Beckman (University of Michigan)
Allison Thomason (Southern Illinois University, Edwardsville)
Mark Garrison (Trinity University)
Judith Lerner (independent scholar)
JoAnn Scurlock (Elmhurst College)
Richard Beal (University of Chicago)
J.P. Dessel (University of Tennessee)
Danielle Parks (Brock University)
Jerry Lyon (University of Chicago)

Yannick Muller (Université de Paris I)
Mary-Ann Pouls Wegner (University of Toronto)
John Robertson (Central Michigan University)
Harriet Martin (University of Birmingham)
Thomas Götzelt (Deutsches Archäologisches Institut)
Gebhard Selz (Universität Wien)
Inge Fischer (American Museum of Natural History)
Paul Larsen (independent scholar)
Augusta McMahon (Cambridge University)
Angelique Corthals (Oxford University; American Museum of Natural History)
Joy McCorriston (Ohio State University)
Javier Teixidor (College de France, Paris)
Gabriela Castro Gessner (SUNY at Binghamton)
Karljürgen Feuerherm (University of Toronto)
Sarah Graff (University of Chicago)
Olaf Kaper (Universität Würzburg)
Leigh-Ann Bedal (Pennsylvania State University, Erie)
Ianir Milevski (Israel Antiquities Authority)
Tine Bagh (Carsten Niebuhr Institute, Copenhagen)
Charlott Hoffmann Jensen (University of Copenhagen)
Cynthia Jean (Université Libre de Bruxelles)
Jason Ur (University of Chicago)
Diane Sharon (Jewish Theological Seminary, NY)
Steve Reece (Saint Olaf College)
Paul Donnelly (Powerhouse Museum, Sydney)
Barbara Porter (independent scholar, NY)
Mandy Mottram (Australian National University)
Caroline Steele (independent scholar, VT)
Carolina Aznar (Harvard University)
Edward Castle (University of Chicago)

EDITOR'S CORNER, from page 2

ican Antiquity authors and discuss how the analytical specialties of men and women have changed over time. As they conclude, "for our discipline to thrive, it is essential that we encourage diverse views in all of the research domains."

Future Thematic Issues

Several people have already contacted me regarding these planned thematic issues:

May 2003 (April 1st deadline)

Efforts in Site Preservation

November 2003 (October 1st deadline)
The State of Academic Archaeology

March 2004 (February 1st deadline)
Archaeology of American Ethnicity

If you would like to contribute, email me at kantner@gsu.edu or call (404) 651-1761!

"Wet" Cover Photos

A number of you have contributed great photos for the cover. However, virtually all of these are from dry environments—the Southwest and Andean South America are well represented. As Jelmer Eerkens's article in this issue highlights, plenty of archaeologists work in other parts of the Americas! Unless you enjoy a steady flow of images of desert archaeology, please contribute cover images!

FROM THE PRESIDENT

Dear SAA members:

Greetings from the frozen plains of Wyoming! I trust your fall has been as busy as mine, and I hope it has been warmer!

I am writing today to inform you all of a very important SAA initiative coming up in the next few months. For some time now, SAA has been planning a Needs Assessment Survey. Although it sounds dull, the survey will ensure that SAA is meeting the needs of its membership and is in tune with the profession. SAA has never conducted such a survey before, and the data we receive will influence SAA directions for years to come. About half of the membership will be surveyed, with care taken to ensure that the various employment sectors of archaeology and all geographic regions are represented. I'd like to see a 100% return rate, and so I ask that if you are included in the sample, please take the time to return the survey instrument. It should only take about 20 minutes to complete.

The survey will be conducted by an independent third party that specializes in membership surveys, and our executive director has negotiated a very reasonable price. By the way, funds were set aside for this survey some time ago. The survey house will keep all names of respondents confidential; although all data tables will be turned over to SAA, we will never be able to match responses with members as no raw data will be returned to the Society.

The survey will be conducted next spring, primarily during March, with all data collection to be completed by April 30. For those of you in the sample with active email, a survey announcement with a web link will be sent to you via email. (By the way, this would be a good time for me to encourage you to take a moment and check the email and snail-mail addresses that SAA has for you. Simply go to http://www.saa.org, click on "members section," and use your login number and password on your SAA membership card to get in. Then click on "search membership database" and search for yourself. In the near future, you'll be able to fix errors online, but for now just send a note to membership@saa.org.) For those selected without an email

address registered with SAA, or if the email bounces back, the survey house will send a paper version of the survey with a return envelope. We know that everyone is surveyed all the time, but this one is critical to your professional organization, and we have tried to design it so that it is not time-consuming to complete and yet meaningful to the future direction of SAA.

I am counting on your participation if you are selected! Frigid temperatures will not be accepted as an excuse—I type with mittens on all the time.

Yours,

Bob Kelly

Bob Kelly

FIELD GUIDE TO ARCHAEOLOGICAL PUBLISHING

Mitch Allen

Mitch Allen is Publisher of AltaMira Press and a Research Associate in the Department of Anthropology and Sociology at Santa Clara University. His Ph.D. in archaeology is from UCLA.

My creative AltaMira colleague, Erik Hanson, once suggested we produce a *Field Guide to Academics* to enable publishing novices to identify different scholarly species in the wild from their appearance and behavior. Good joke, at least until my teenage son turned to me while watching some National Geographic special or another, replete with talking Ph.D. heads describing pyramids or Stonehenge or the Andes, studied me for a second, and proclaimed, "Dad, you archaeologists all look alike." Maybe there is something to that field guide idea after all.

Archaeologists are a breed apart, clearly distinguishable in the wild from economists or philosophers. To help the identification process, one section of this *Guide* will need to cover their publishing habits that—like the bushy beard, the LL Bean wardrobe, and the proclivity toward Budweiser—will help identify archaeologists as a separate species. Here are some key characteristics that might appear in the *Guide:*

ARCHAEOLOGISTS PAY LOTS OF ATTENTION TO SKILLFUL COMMUNICATION. **No one outside the field of sociology cares what a sociologist has to say. And there's no great clamor for coffee-table books on *The Romance of Comparative Linguistics.* But real people seem to care about what archaeologists find and what they think about it. For archaeologists, good writing matters. Fortunately, there is a small coterie of practicing archaeologists who can write well enough to make the past come alive to the *National Geographic* crowd. Unfortunately, all archaeologists who write books for the public—or even reports for nonarchaeological project sponsors—need to have these skills. One way of identifying an archaeologist, then, is by his or her writing habits. If they can't wax eloquent about the mysterious contents of a fragmentary cooking pot or reconstruct an unknown ancient civilization from the site-distribution pattern in a river valley, then you're probably talking to a religion scholar.**

ARCHAEOLOGISTS OFTEN BRING GOOD NEWS. **As a corollary to this, archaeologists can be identified because they occasionally have something new to talk about. While "lit-crit" folks might try to sell you on the analysis of the sexual orientation of minor characters in *Oliver Twist,* long forgotten the day you graduated high school, archaeologists can legitimately speak about finding the coffin of Jesus' brother or pushing human ancestry back a couple of million years in Chad.**

ARCHAEOLOGISTS ARE A SLOW-MOVING, SLOW-LEARNING SPECIES. **Good grades in academia are based upon how much you publish. Completion of CRM projects is also dependent on turning in your written homework. One would think that archaeologists would have understood by now that prompt publication is a good thing. I know of no other field where funds have been set aside to bribe scholars to publish their projects, nor any discipline that has field reports a half-century old still waiting to be written. Most scholarly fields complain about the lack of adequate publishing outlets. In archaeology, it is the reverse. There are plenty of outlets but not enough finished works.**

ARCHAEOLOGISTS CAN NOT BE FOUND WHEN NEEDED. **Another marker that I use to identify archaeologists is their invisibility. Archaeological authors will inevitably drop their completed book in the airport mailbox en route to a 12-week field season in some remote location. A postmarked package from O'Hare Airport arriving at AltaMira will always contain an (overdue) archaeological manuscript.**

Inevitably, there will be three simple questions about the manuscript that require answers before we can begin to produce the book. Without those answers, the book sits on the shelf for those 12 weeks. My favorite instance was the author who shipped the manuscript to me with a return address for proofs at a Bolivian copper mine at which he, or one of his staff, planned to stop every few weeks for mail. Progress on that book was painfully slow.

ARCHAEOLOGISTS ARE VISUAL LEARNERS. **The feral archaeologist will always feel naked if his/her writing doesn't contain illustrations, whether the piece needs them or not. At AltaMira, our rule has been that illustrations are used to advance the intellectual argument, not as aesthetic fillers. But even the densest theoretical treatise will be offered to us with accompanying slides containing aerial views of sites, lithics drawings, and GPR profiles. As wedded as economists are to their formulas and equations, archaeologists are to their charts, photos, sherd drawings, and maps.**

ARCHAEOLOGISTS WILL STEAL FROM EACH OTHER WHEN THEY CAN. **This raises the specter of copyright permissions, a subject large enough for its own column, preferably by someone who knows copyright law better than the average publisher. In any other discipline, the use of illustrations from published sources or other people's projects would inevitably require the long and painful task of clearing copyright permissions and (horrors!) possibly even paying for the privilege of using the images. Somewhere in the prehistory**

A past era of archaeological publishing? This fanciful display of an archaeologist's office at the mega-resort of Atlantis, near Nassau, is centered on an old typewriter and reams of descriptive material.

of archaeology, the trick was devised to recopy published artwork with a designation like "Illustration after Allen 1993" and thereby avoid the legal entanglement of asking permission. Besides skirting copyright law, it has also provided gainful employment to generations of graduate students and their artistic friends. But it can be carried to the point of absurdity—a recent book contains a fanciful reconstruction of an ancient city, copied and slightly modified "after" some previous scholar's reconstruction.

ARCHAEOLOGISTS ARE CLANNISH AND SUSPICIOUS OF OUTSIDERS. **Publishers quickly learn that there is no discipline of archaeology, rather a large number of little fiefdoms. "Mayanists" don't exist—there are highlanders and lowlanders, preclassic and postclassic clans. Southwestern archaeologists don't read Southeastern archaeologists, and neither talk to the Plains tribe. Bronze Age specialists won't speak to Iron Age specialists. Ceramic folk don't talk to lithics folk. And the processualists and postprocessualists are in the midst of a 30-years war. Edited volumes are rife in archaeology because each scholar speaks about his own project, region, theory, or time period and feels uneasy about speaking for others. Publishers complain about the overwhelming volume of edited books and would rather replace them with a smaller number of single-authored syntheses, but, in a clan-driven society, few are willing to risk developing projects beyond their own narrow specialization.**

These are only a few of the items that belong in the *Field Guide's* publishing section. Progress has been slow, but we plan to have the section of the *Guide* for archaeologists completed before reports from most excavation projects of the 1960s see the light of day. Guides to most other scholarly disciplines will be in their 3rd or 4th edition by then. The *Field Guide* staff would welcome additions by experts who have observed archaeologists in the wild and wish to send us their observations. No pictures, please. 回

THE ARCHAEOLOGIST AS STORYTELLER

HOW TO GET THE PUBLIC TO CARE ABOUT WHAT YOU DO

Peter A. Young

Peter A. Young, a former Life *magazine foreign correspondent and managing editor of the* Saturday Review, *has been editor-in-chief of* Archaeology *magazine since 1987. In 1996, he was a recipient of the Special Achievement Award of the Society of Professional Archaeologists.*

At a museum reception some years ago, I was asked by an investment banker, whom I did not know and who was trying to be friendly, if *Archaeology* had published anything recently that might be deemed, in his words, "truly amazing." Flattered by the attention, I regaled him with new evidence concerning the evolution of the Neanderthals. By the time I got to Ice Age weather conditions on the European continent, however, his eyes had become glassy, his attention distracted by a bond market discussion to his left. I had lost him. Just like that.

The incident reminded me of Randall McGuire's experience at the State University of New York at Binghamton, as described in a back-page column ("The Dreaded Question," *Archaeology*, November/December, 1995). In it, McGuire recalled a cocktail conversation with a university vice president who, upon learning that he had just returned from excavating in Arizona, wanted to know what, if anything, he had found. As McGuire explained his work with competing theories of social complexity in the Hohokam Sedentary period, the vice president's eyes glazed over, causing McGuire to break out into a full-scale sweat knowing that in all probability he was blowing his chance to impress the man who would rule on his bid for a tenured position.

If a journalist like myself, whose job it is to make archaeology accessible to the general public, has to contend with the "glaze-over effect," then scholars like McGuire, with less experience in the art of public presentation, are doubly or triply vulnerable. If I had a hard time getting through, how was McGuire going to do it? Was it worth his even trying? The answer of course is "yes," lest, in the words of one of our academic contributors, "we be left talking only to a steadily shrinking group of peers, while our fellow citizens embrace a vision of antiquity that consists of little more than noble fragments and colorful caricatures."

But *how* do you get through?

Consider the lead paragraphs of the following two stories commissioned by *Archaeology*, the first in 1983 written by scholars Graeme Henderson, David Lyon, and Ian MacLeod; the second in 1998 written by Denis Gray, the Associated Press bureau chief in Bangkok. Both describe the discovery of the HMS Pandora, the ship the British sent into the South Pacific to arrest and capture Captain Bligh and the mutineers of the HMS Bounty.

Backing into their story, Henderson, Lyon, and MacLeod begin:

> The British government sponsored some extraordinary voyages to the South Seas during the second half of the eighteenth century. Perhaps the best known and most successful was Captain James Cook's expedition, which set out in the bark Endeavour to observe the transit of Venus at Tahiti on the 3rd of June in 1769. Having carried out his principal objective, Cook then went on to discover and explore the east coast of the Australian continent, setting the stage for the British

occupation of 1788. Almost as well known, but entirely unsuccessful, was Captain William Bligh's plant-gathering expedition, which resulted in one of the most infamous of all mutinies and the loss of two of the British Navy's ships, HMS Bounty and HMS Pandora.

Gray's lead is considerably more visceral and to the point.

> The SCUBA tanks were swaying in their racks like drunken sailors as our boat rolled in a frothy sea, fighting strong currents and keeping a respectful distance from the barely submerged, razor-sharp reefs that surrounded us. Lurking straight ahead, a greenish patch of tropical water marked the spot where more than two centuries earlier the hapless HMS Pandora—exactly the size of our own charter craft—slid to the bottom. Thirty-five men had been lost, including four prisoners who had taken part in history's most famous mutiny at sea.

This I like. Gray is passionate about nautical archaeology, and he has hooked me immediately with graphic details. Having explored the wreck with marine archaeologists, he also has a compelling story to tell and will use all the tricks of his trade to keep me riveted to my chair. Evocative writing is what Gray gets paid to produce.

Getting archaeologists to be evocative about what they do would appear to be in violation of their professional codes of conduct. "I'm an archaeologist, not a storyteller," one scholar told me by way of justifying his disinterest in sharing his work with the general public. "I'm not supposed to be emotional about things like this," another confessed when I asked him what was going through his mind when he stumbled onto a cache of rare Maya flutes and *ocarinas* at a Maya burial site in Belize. When pressed, he admitted being thrilled to have found something so rare. "They hadn't been played in a thousand years!" he gushed. But he hadn't put it in writing.

Contrast such academic reticence with the passion and excitement experienced by Vancouver Maritime Museum director James Delgado in his account of diving on the remains of a thirteenth-century wreck from an invasion fleet sent by Kublai Khan to conquer the Japanese ("Relics of the Kamikaze," *Archaeology*, January/February 2003):

> Clusters of timbers and artifacts suggested that a ship, or ships, had crashed into the shore and been ripped apart. There were bright red leather armor fragments, a pottery bowl decorated with calligraphy, and wood with what seemed like fresh burn marks. My heart started to pound when I swam up to one object and realized it was an intact Mongol helmet. Nearby was a cluster of iron arrow tips and a round ceramic object, a *tetsuhau*, or bomb. The realization that I was holding the earliest evidence of bombs at sea was one of those magic moments in archaeology when you just smile through the regulator clenched in your teeth and think about the fun you're going to have with historians who doubted that they even existed then.

The extraordinary Mayanist Linda Schele was passionate about what she did and could tell you tales that would make your head spin. In a 1991 interview with *Archaeology*, she noted that "the job I seem to have now is to provide the public voice—you know, to give people access to the things scholars learn from the archaeology, combine it with the interpretations of the glyphs and imagery, the work of people who study the modern Maya, and the approaches of many disciplines, and say to the public, 'Listen folks, let me tell you a story about a great king.'" When Schele died of pancreatic cancer in the spring of 1998, colleagues mourned the loss of her erudition and scholarship. I would miss her stories.

Much of what archaeologists do is technical, tedious, time-consuming, and, many of them believe, of little interest to the general public. They prefer to communicate with each other, sometimes in jargon mysterious to all but themselves. Consider these titles of papers delivered at an annual meeting of the Society for American Archaeology: Rock Art as an Indicator of Early Upland Aggregation Sites in the Northern Great Basin; Obsidian Hydration Chronology in Eastern Oregon; Anti-Passive Construction in Glyphic Texts, and Technotypologic Patterns in the Levantine Mousterian. One useful way to find out what these papers are all about is to button-hole their authors at a convenient watering hole at the end of the day, where, if pressed, they may well reveal the flesh-and-blood stories hidden within their lifeless prose.

"Is Atlantis a real legend?" The mega-resort of Atlantis spent an enormous amount of money creating extensive underwater ruins that appeal to the public's desire for stories rather than lessons about human history. The trick is to achieve both.

Such mellow beginnings can beget long and productive relationships resulting in story after story from the same author. Jerry Milanich of the Florida Museum of Natural History is a case in point. We met at an annual conference of the Society for Historical Archaeology where Jerry was reporting on his discovery of Spanish mission sites in the Southeast. Eager to convey the excitement of his work, Jerry went out of his way to make himself available to *Archaeology*. In the months that followed, I frequently called or emailed him to see what he was up to. "Just in from the field," he would typical reply. "You won't believe what we've found!" Then he'd tell me about yet another recovered mission site or De Soto encampment.

Other archaeologists have been less forthcoming. I tried without success to persuade an American archaeologist to write about his work in western Tanzania where he had replicated an iron smelting furnace—a lost technology only two 90-year-old men from a local village could recall. With their help, the archaeologist succeeded in building such a furnace, proving important points about the metallurgical history of Africa. What made this pioneering ethnographic story most compelling to me, however, were the reactions of the local people, who rediscovered in the iron-making process the meaning of the images in their poetry and folklore. Initially fearful of an American archaeologist in their midst, they ended up embracing him for giving back to them a lost heritage. A story about his work did appear in a scholarly journal, but without this compelling human angle.

A more rewarding experience involved the author of an article about ancient birth control, first published by Harvard University Press, in whose hands it languished for lack of promotional savvy. The idea that women in antiquity had developed sophisticated ways of averting conception was, I felt, an extraordinary piece of news hidden within a book few people were going to know about. A popular version in *Archaeology* (March/April 1994) resulted in an avalanche of mail and invitations to its author, John M. Riddle, to lecture on the subject coast to coast. Riddle was amazed at all the attention he was suddenly getting, a sure indication that he had seriously misjudged how good the story he had chosen to tell actually was.

So how do you get the attention you deserve? Answer: By telling a story—your story—about what you do, why you do it, what you have learned, and why people should care to know about it.

Here, from our editorial guidelines, are a few things to keep in mind:

ARCHAEOLOGY IS NOT AN ACADEMIC PUBLICATION. It is critically important to remember that less than one-half of one percent of our readers are professional archaeologists. Your proposed article must clearly spell out why the other 99.5 % of our readers—bank tellers, doctors, librarians, corporate raiders— would be interested in your story.

PUT YOURSELF IN THE PIECE. Many scholars are surprised to learn that the general public is not just interested in what they do, but who they are. This is especially true for archaeologists: chances are you've traveled to a lot more interesting places, met a lot more interesting people, and had many more interesting adventures than most people. Nobody becomes an archaeologists to get rich, they do it for the experience; let the guy who grew up wanting to be an archaeologist but ended up a lawyer live vicariously through you!

ENABLE YOUR READERS TO SEE THROUGH YOUR EYES, BUT DON'T LOSE THEM IN TECHNICAL DETAILS. If you're writing about a fabulous discovery you made in the depths of the rain forest, bring the complete experience to your readers: what does the jungle look like, smell like? What sort of animals are prowling about? What's camp like? If you only have a limited number of sentences to evoke a site for lay readers, you're better off describing the looming mountains or sun-baked bricks than the fact that the 4.5-x-10-foot structure is 3.3 feet south of the 15-foot-square platform. And explain or avoid technical terms.

KEEP IN MIND OUR WILLINGNESS TO HELP YOU BUILD UP YOUR STORY. We are eager to work with you to smoke out the good stuff. That's what editors are for. Here's an extreme example. Some years ago, I learned of the work of a Belgian archaeologist teaching in Canada. She had helped harvest scores of mint-condition icons from the wreck of a 17th-century Russian warship on the floor of the Mediterranean Sea. We wanted her text and photographs for a cover story that would appear during the Christmas season. A draft in English arrived two days before the last possible deadline. The piece was poorly written and unpublishable. Getting it rewritten quickly became a matter of the greatest urgency. I arranged to have an editor interview her by phone. Culling critical detail not present in the draft version, he was able to rewrite the piece, fax it to Canada for the author's approval, have it vetted by a scholar familiar with her work, and get it back to me in time to make the print run. I should add that the author was delighted with the results.

LASTLY, REMEMBER THAT YOUR STORIES, ANCHORED IN SOUND SCHOLARSHIP, WILL COMMAND THE ATTENTION OF READERS EVERYWHERE TO THE EXTENT THAT THEY BOTH INFORM AND ENTERTAIN. Writing for public consumption can be demanding and time-consuming and won't count for much in your pursuit of a tenured position. But those of you who do find the time provide an incalculable service to the profession: you humanize it. With due respect to the demands of graduate school and the academic life thereafter, I believe the storyteller in you deserves more of your time. You are witnesses, in one way or another, to the history of humanity. The public is more than a little curious to know what you have learned.

REPORTING ON GOVERNMENT ARCHAEOLOGY

MEETING THE NEED FOR INFORMATION

Anne M. Wolley Vawser

Anne M. Wolley Vawser is with the Midwest Archaeological Center, National Park Service, and is the Associate Editor of the Government Archaeology column.

Just the other day I received an email from a woman requesting a copy of one of our Special Report series documents (Figure 1). She wanted to know where she could download an electronic copy. I sent an email back to let her know our website was currently offline while we switched to a different network, but that I could put the document online where she could download it. I also offered to send a paper copy of the report if she preferred. She emailed back and indicated she lived in Australia, and with extra postage and mailing time it would probably be easier for her to just download it. I obliged and put the document on an anonymous FTP site and told her where to retrieve it.

No paper, no stamps, no phone calls, no trips to stock shelves to retrieve a document, no padded envelope. The entire transaction was completed electronically. Whether that is good or bad depends on whom you ask. And whether or not that is what the future of publishing will be probably also depends on the people involved and the specific field or industry. For government publications, I believe it will become more and more the way that business is done, for two primary reasons: time and money.

Because government institutions are funded by taxpayer dollars, the public demands and deserves free access to information on publicly funded programs. Archaeological projects conducted by federal and state governments are of great interest to the public, and if they are to continue to be supported, access to information must be easy and affordable, if not completely free. And this applies not just to the general public but to professional archaeologists who need access to information about projects to complete their own work, whether it be publicly or privately funded. In general, most federal and state agencies are very good about reporting the results of their work on archaeological projects; it is the delivery part that can become a sticking point.

As budgets for heritage preservation programs become smaller and smaller, less of the available funds can be used to print and deliver reports, especially free or low-cost reports. Average printing and binding costs for a simple 100-page report (black and white, perfect bound, and no color pages) can be up to $9 per
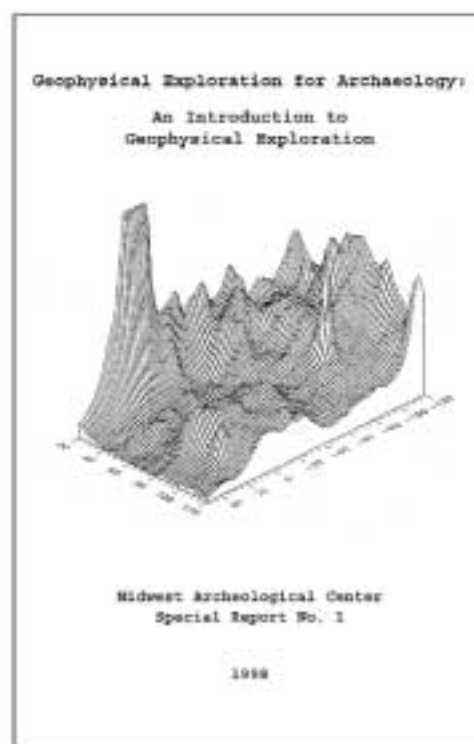
Figure 1: Most archaeological reports can be easily disseminated either by printing copies on demand or by transmitting digital copies. Rather than spending the time and money to get this report to Australia, the author was able to quickly transmit it via the Internet.

copy. That's a pretty expensive report to be giving away for free, and that cost doesn't include postage and handling, which can add another two or three dollars. Most federal agencies don't charge for archaeology reports, while most state agencies charge only a minimal amount. I asked both Tom Green, Director of the Arkansas Archaeological Survey, and Bill Green, former Iowa state Archaeologist and currently the Director of the Logan Museum of Anthropology at Beloit College in Wisconsin, if

states make any money by selling their reports. Both indicated that state publications pretty much break even or must be subsidized to a certain extent. Strict rules for federal agencies require that any charges be only enough to recover the cost of production (topographic maps sold at $6 each are a good example). Many federal agencies find, however, that putting in place the infrastructure to establish what the cost is and collect and deposit funds is more work than the limited amount of funds that might be recovered.

It is clear that both state and federal agencies need to continue to produce reports that are timely and professional and meet the requirements of scientific reporting. More importantly, funding for reporting is unlikely to increase in the future. I believe, however, that we can take a businesslike approach to the problem and still meet our customer's needs without breaking the bank. Below are some ideas that have been discussed around staff meeting rooms and building corridors at some government offices.

PUBLISH RESULTS IN PEER-REVIEWED JOURNALS. **Preparing reports for this format may require a little more effort than the standard CRM (cultural resource management) type of report, but the information will ultimately reach a wider audience and the journals are readily available in most academic libraries. Reporting in this format may also encourage more scientific analysis of public archaeology projects and result in more useful products. Some of the mundane material in CRM reports, such as site descriptions, sketch maps, or compliance procedures, can be put into in-house documents that are filed along with other project documentation or project archives and disseminated on demand if researchers find they need more information. The main drawback of this approach can be the time it takes to get an article submitted, reviewed, and finally printed. The delay between project completion and publication can be years. This format also will not be appropriate for all reports and therefore will not eliminate the need for agency technical-report series. The primary advantage, however, would be easy access to the project results by other professional archaeologists or students without the need to track down a copy of a "gray literature" report.**

ON-DEMAND PUBLISHING. **Most printing companies offer discounts that reduce the cost per copy as the number of copies printed increases. Many small project reports require only short runs of 100 or fewer copies and can never achieve these discounts. This may result in the printing of larger quantities than are needed, and ultimately, these extra copies sit unused in back rooms or warehouses, taking up space. However, reports these days are produced on computers and can easily be printed in small quantities on high-quality, black-and-white or color laser printers. Publishing single copies of reports as they are requested could ultimately reduce the cost of publication if limited numbers of the report are needed. The problem with on-**

demand publishing is that it requires a fairly sophisticated system of distribution and document management and may require migrating computer files to new formats (such as newer versions of software) or hardware (such as computer disks or CDs). It may also require investment in high-quality printers or binding equipment, depending on what quality is required. The advantage, however, could be the reduced overall cost of printing and storage.

DIGITAL PUBLISHING. **There is nothing that will get discussion going faster than the suggestion that we stop producing paper copies of reports and "go digital." I am a fairly pro-digital person, but the suggestion of eliminating paper copies altogether makes me nervous. I just do not think it will work. Someone will always want a paper copy and, if all else fails (like erased files, bad disks, or old formats), you can *always* go get the paper report and make a copy.**

That said, I believe we can move toward the digital era and save ourselves some time and money and maybe even produce reports that contain more information. The near-future of digital publishing will probably be a combination of the traditional report production style and publishing on demand. Currently, our office sends reports in Adobe Acrobat format to printers contracted through the Government Printing Office. Consequently, a part of our paper-report production process is already geared toward electronic distribution. The same report that can be sent to the printer can be delivered electronically over the Internet, as an email attachment, via download on an FTP site, or sent via mail on a CD. When the report is received by the requesting archaeologist, they can view it on their computer or print it if so desired, and it will look just like the copies we had professionally printed. One exception to this might be color photos and maps; reports can be produced to include color images viewable on screen but printed in black and white to reduce costs. A small number of reports could also be printed in-house for initial distribution (most government agencies must provide reports to a specific list of institutions, such as State Historic Preservation Offices or Regional Offices) and any further document requests could be handled electronically. Again, the drawback of this plan is that it requires a system and someone in charge to make sure electronic files stay current. The advantage is that printing costs are reduced, physical storage space is no longer needed, and documents can be delivered in digital "real time."

The suggestions I have offered will not address reporting requirements for small government contractors without the means to produce completely digital reports. And popular reports will probably always be more appropriate in paper format. Most of us agree that government agencies need to produce more popular, general-readership reports, and maybe using some of the suggestions above will free up more time and money to allow government archaeologists to write them.

NECESSITY AND INNOVATION

CROW CANYON'S CONVERSION FROM PRINTED SITE REPORTS TO ONLINE PUBLICATIONS

Kristin A. Kuckelman

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The publication of research results is crucial to the advancement of archaeological knowledge, method, and theory. Site reports, which present findings of field excavations, contain many of the empirical data that are the basic building blocks upon which advances in our profession depend. Because site reports are primarily descriptive, they do not become obsolete. It is thus critical that excavation results be published and be as accessible as possible to researchers. However, with every year that passes, the quantity of data gathered in the field mushrooms exponentially and the cost of publishing on paper becomes increasingly prohibitive. Conducting research by searching through these documents manually also is becoming more and more cumbersome, time-consuming, and impractical.

Crow Canyon's Decision to Publish Electronically

With the above thoughts in mind, the staff of the Crow Canyon Archaeological Center (a not-for-profit research and education institution in southwestern Colorado) decided, in January 1996, to shift from printed site reports to some form of electronic alternative. We knew from experience (Lightfoot and Etzkorn 1993) how costly and time-consuming the publishing of printed site reports could be. When we decided to undertake electronic publishing, we did not know exactly what the product would be; there was no model to follow. Our goal was to provide all essential descriptive information in an interactive and user-friendly format that could be presented and queried online. We wanted a database that would contain concise, descriptive text in subject-specific fields, as well as drafted maps, color photos, and artifact analysis data.

Our initial task was to decide on a course of action for a descriptive report that, in early 1996, was already in the final stages of preparation (Varien 1999). This report was too far along to be converted into the new interactive format we envisioned, but was too lengthy to be published on paper. For this report, we decided to compromise between the two formats; the result was a publication presented online as static text pages and also available on compact disc.

Crow Canyon's Interactive Publications

Over the next six years, a team of numerous Crow Canyon staff members and consultants with expertise in such areas as archaeology, computer technology, graphic design, production, and publication tackled the hundreds of issues that arose during the design of our interactive electronic site reports. Team members juggled various duties and commitments and struggled to find as much time as possible to work on this important project.

There were many hardware and software decisions to make. We needed a relational database and decided that Microsoft Access was the optimum development software for our needs. Some of our artifact data were already stored in Advanced Revelation (AREV). We converted these data into Access and began entering field data into Access as well, with the intention of migrating into a database server for the final product. Although our original idea was to include only "essential" data and keep our system as simple and user-friendly as possible, by the time we included all the components that we considered to be essential (provenience data, descriptive data, basic interpretations, artifact data, maps, and photographs) and had constructed the necessary links between all the different data files, it was a complicated system.

We conceived of this descriptive (or database) portion of the electronic report as flowing directly from field documentation and lab analysis records. There is a relatively long history of databasing artifact analysis information, so these data converted smoothly into our new system. In contrast, most archaeologists did not learn to dig in a database-driven environment, so our field documentation required some redesigning. We adjusted our field forms to match the data entry screens and updated our field manual accordingly (Crow Canyon Archaeological Center 2001). Our field forms are now more structured and contain many additional prompts; this ensures that field personnel record all of the needed types of data, that field infor-mation is recorded consistently at a given site and from one site to another, and that data entry proceeds as quickly, efficiently, and error-free as possible.

From the outset, we were uncertain as to the level of interpretation to provide in our online reports. We finally decided to input inferences from the level of the individual feature (e.g., hearth, posthole, doorway) through the study unit (e.g., structure, extramural sur-face, midden) into the database. Inferences above the level of the individual study unit (e.g., architectural block, intrasite, intersite) were considered too text-intensive to work well in a database format. This type of inference would be included in prose "chapters" that would accompany the database online. These prose documents are much like those found in the synthetic sections of traditional site reports, except that they contain links to appropriate maps, photos, references, and other files within the database. Unlike the database portion of the report, the interpretive component consists of static pages, including a table of contents.

Figure 1: The introductory web page for The Castle Rock Pueblo Database, *illustrating the kinds of data that can be presented in online publications.*

In 2000, information on Castle Rock Pueblo went online. This information consists of dynamic data-base information presented in a user-friendly format (Crow Canyon Archaeological Center 2000), as well as static chapters of interpretive text (Kuckelman 2000). Recently, interpretive text for Woods Canyon Pueblo (Churchill 2002) was published online; the database for this site will be available in the near future. Publications on Yellow Jacket and Sand Canyon pueblos are scheduled to go online in August 2003. In addition, there are many non-electronic publications that contain interpretations about these sites (refer to the bibliography available at http://www.crowcanyon.org). Due to go online soon is the third and final component of our electronic site reports: our multisite database. This will facilitate access to, and manipulation of, data from either one specific site or from a combination of the numer-ous sites we have investigated. This database will contain data additional to those in the site-specific databases. Researchers will be able to query for specific information and download the resulting data to conduct their own research. It is important to note that the site database and interpretive text for each site are copyrighted and cited separately from each other; the multisite database is also cited separately.

Pros and Cons of Publishing Online

We have found several important advantages to publishing online. One of the most significant is that
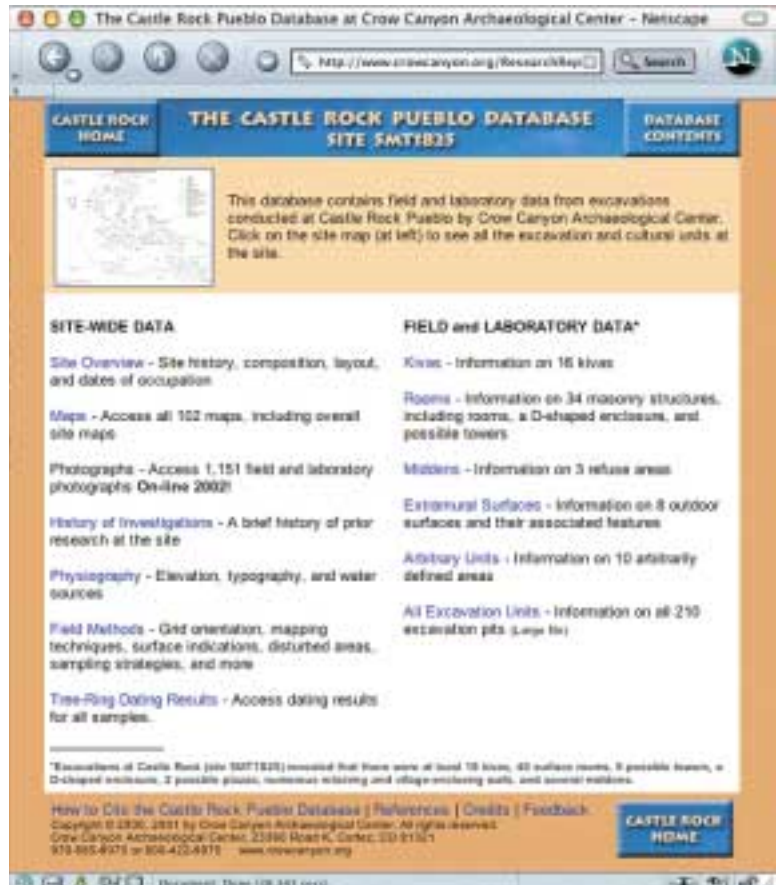
the reports reach a worldwide audience virtually instantaneously. The scope of this level of dissemination of information was inconceivable a decade ago. We strive to meet the publication requirements of the archaeological profession and also to meet the needs of the public, some of whom participate in our educational programs and want timely, accessible, understandable, and interesting site reports. Online publications can also be used as companion pieces for educational materials (e.g., Connolly et al. 1999, 2001) and as a bank of information to support interpretive material published in journals and books. In preparing our online Castle Rock publication, every effort was made to meet the needs of multiple audiences.

Another advantage is that, after initial design and construction, our publications can be produced in a more timely manner than printed reports. New data can be entered easily and all data are stored electronically, which means they can be searched, updated, queried, grouped, manipulated, or downloaded. Also, errors can be readily corrected. A third advantage is that this electronic publication can contain much more descriptive data, color photos, and maps than can printed reports without adding appreciatively to the cost of publication. Reasonably computer-literate users also can navigate an electronic report and find the desired information more quickly than they can search manually through a printed report. Although preparation of descriptive material in our electronic publications is not significantly faster than writing prose descriptions for printed reports (although it is much less tortuous), database entries are not edited the same way that paper manuscripts are copyedited, resulting in significant savings.

Many of the disadvantages of publishing site reports online are associated with the initial setup. Interactive publications require much more design effort than do printed reports; this is especially true for databases such as ours that contain data from multiple sites and projects. Because our research is long-term, we knew that our database would have to allow users to retrieve data for multiple sites and conduct intersite queries. Incorporating these capabilities into the design of the database was particularly challenging because, not surprisingly, there were inconsistencies in data recording among multiple projects that we had carried out over the course of 15 years.

We print hard copies of interpretive text and archive these in several accessible facilities; however, we still face decisions regarding long-term maintenance and archiving of our database. We currently maintain our own database, but we are evaluating the possibilities for storing our data in a permanent archiving institution. Artifacts, artifact analysis data, and paper records (including maps, and photographic slides and prints) are permanently curated at a federal facility (the Anasazi Heritage Center, Dolores, Colorado).

Figure 2: A database-generated web page from The Castle Rock Pueblo Database, *published by Crow Canyon Archaeological Center.*

Other issues we have had to consider in the course of developing our online publications include:

• **copyright and citation issues**
• **costs of hardware and software upgrades, and of photographic digitizing equipment**
• **absence of revenue from our online publications**
• **conversion of text into HTML and the creation of Active Server Pages, which necessitated specialized staff training**
• **slow loading time experienced by some users (as the technology improves and wider bandwidth becomes more widely available, users should enjoy quicker response time)**
• **the complexity of the linking in our database system, so that even the simplest modification of the system could result in malfunctions elsewhere in the system or could render data already entered inconsistent or incomparable with data not yet entered.**

Conclusions

The primary product of our online publishing venture is a large, complex database that we believe works quite well for the purposes for which it was designed. It is important to note that our design has by no means exhausted the possibilities of what an online publication could be. The design of our reports has been (and probably always will be) partly restricted by our ability to fund and staff this endeavor. There are clearly disadvantages as well as advantages to publishing site reports electronically, but because the rising costs of publishing printed reports have put that option out of the reach of our organization (and many others, I suspect), we believe that electronic publishing has become not only a viable alternative, but a necessity in archaeology. Our profession can find thoughtful and workable solutions to the problems associated with online publishing, and online databases could become valuable resources for researchers in the coming decades.

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WRITING FOR *E-TIQUITY*

PEER-REVIEWED ONLINE DIGITAL PUBLISHING FROM THE SAA

Larry Conyers and John Hoopes

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On October 31, the SAA launched *e-tiquity*, a digital journal accessible to anyone through the Society's homepage (http://www.saa.org). This publication has as its raison d'être the provision of a peer-reviewed outlet for scholarly contributions to archaeology that cannot be distributed feasibly via traditional print media. The first number is "Ground Penetrating Radar (GPR) Mapping as a Method for Planning Excavation Strategies, Petra, Jordan," by Larry Conyers, Eileen Ernenwein, and Leigh-Ann Bedal. This scholarly article is written in Hypertext Markup Language (HTML) and is readable using different versions of widely available browser software such as Netscape Navigator or Microsoft Internet Explorer. It is quite different from an online version of a print article. For one, it contains more text and full-color figures than are found in a typical article. Furthermore, its features include pop-up windows and animations (Figure 1), and its multilayered design permits readers to view the material as a bulleted list or explore topics in greater detail. This format anticipates how readers use an article: scanning it for general points, getting the gist of the main arguments, and then closely examining the detailed data. *e-tiquity* represents a significant addition to the SAA's mission of disseminating archaeological research. We hope that it will also be seen as an innovation in academic publishing as a whole.

The Internet, and specifically the World Wide Web, offers advantages and disadvantages for academic publishing. It can disseminate large quantities of scholarly literature to millions of readers rapidly and for relatively little cost. It can also deliver information in a wide variety of formats, ranging from text and photos to databases, movies, and virtual-reality landscapes. However, quality can range from superb to horrific, with topics ranging from Folsom point technology to the lost continent of Lemuria. We hope to remedy this through the application of traditional, anonymous peer-review to digital resources. The World Wide Web is ubiquitous. One can access material based in Kansas or Kathmandu. However, there is little guarantee of permanence since websites—collections of files stored on one or more computers—are inherently ephemeral. Even the best

resources may disappear upon the death of their creator. The SAA's sponsorship of *e-tiquity* represents a long-term commitment to the perpetuation of the availability of a digital publication while at the same time promoting the innovative use of new media to present cutting-edge research and interpretations of archaeological data.

At present, most peer-reviewed publications on the Internet are online versions of papers that previously appeared in standard hard-copy media. However, papers published digitally can contain an abundance of color photos, maps, animations, data files, and other materials that are difficult or impractical to include in traditional print journals. The information can also be presented in styles that depart significantly from the linear formats of traditional articles, allowing readers to access data and conclusions more effectively than previously possible. We believe that combining responsible peer review with the stewardship of an established professional society will eventually make digital publishing as reliable as traditional books and journals. Digital publishing should make it easier for authors to produce, review, edit, and "go to press" in ways not possible in hard-copy journals. It also provides the potential to reach a worldwide audience that goes well beyond SAA membership to include institutions that may not own copies of our print journals.

Publication on the World Wide Web allows authors a number of advantages not available in traditional print publications. Articles produced as digital files (both text and images) can be submitted online for review, revision, and resubmission. Many more graphic images, such as photos, maps, graphs, data tables, and other materials, can also be included, with length determined by the ability of reviewers—not the budget of the publication. However, the model for *e-tiquity* is quite different from that of our print journals: authors must assume primary responsibility for layout. The trick is to maintain a design that is readable and effective.

Publishing Innovations in *e-tiquity*

The first article for *e-tiquity* features 42 color images—far more than could possibly be included in a traditional print journal. All
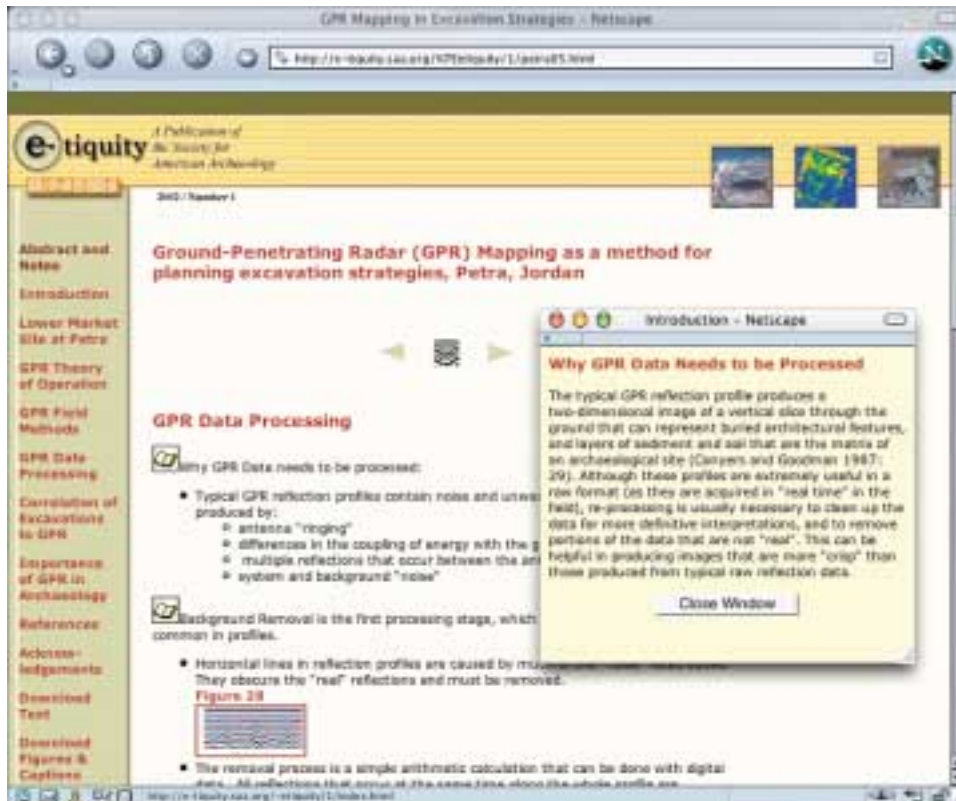
Figure 1: The presentation of information in the Conyers et al. e-tiquity *article is layered, with brief outlines that allow readers to quickly survey the content and pop-up windows that provide more detailed text.*

are accessed by selecting small "thumbnail" icons that cause the figure to appear in its own box. Animations that illustrate three-dimensional data are accessed in the same fashion. The article is written so that it can be read in three different ways. An abbreviated version of the article is available as a "bulleted" list of summaries of the most important points. For those wanting more details about the subject, links were constructed to pop-up windows where more complete versions of the text could be read. Versions of both the text and the images are available in formats that can be downloaded and printed on paper.

The article can be read in either a linear or nonlinear fashion. The seven major themes or "bulleted" topics are visible as a sidebar on each webpage to permit easy navigation from topic to topic. A reader perusing the article for the first time can move through the major subjects and thumbnail sketches of the contents of those pages without having to read the whole article. Images and maps pertaining to each of the bulleted themes are accessed by selecting icons that cause them to pop-up in windows, if desired. Some of those images will automatically load animations that are also played within pop-up boxes (Figure 2).

In this way, the reader can move quickly between subjects, accessing more details and figures if desired, but getting the basics of the article by navigating through a more abbreviated version with a few clicks of a mouse.

The article also provides a way of accessing raw data used in producing the maps via a link to the author's website, where these primary data files can be downloaded for analysis by anyone (something rarely possible without writing the author and asking) together with software for data processing and instructions on how to use it. This link to unreviewed material on "author's pages" is a unique feature of the *e-tiquity* format. The hope is that readers wishing to work with the data could test the published conclusions for themselves or develop different processing methodologies, thereby advancing all our knowledge. At present, there is no other way to transmit data as efficiently and widely as this.

Creating the Article by Conyers et al.

Writing the article used in the first *e-tiquity* was at first no different than constructing a normal print article, except that more
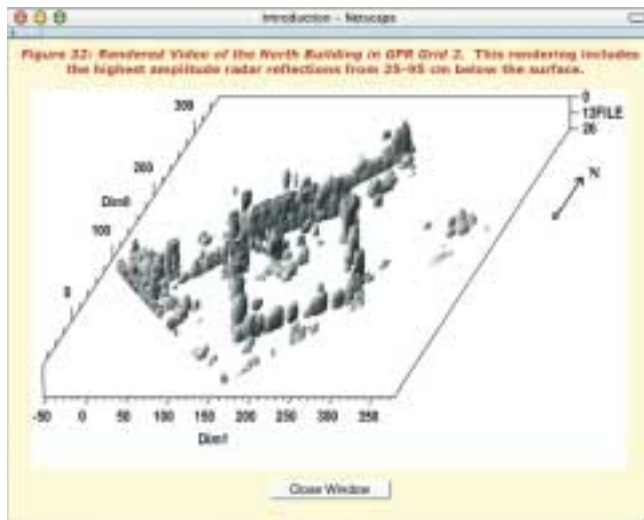
Figure 2: Useful content that can not be included in a print journal can be part of e-tiquity *articles, such as this animation from Conyers et al. in which three-dimensional GPR data are rotated so that the viewer can see all sides of the subsurface features.*

figures could be included and referenced to illustrate pertinent points in the text. The design team included all the authors of the article, but also web design professionals who suggested pop-up window formats and consulted on web navigation issues. To construct the webpage, the main themes of the article were summarized as bulleted items, each on its own page. The full text of the article was then pasted into Javascript text boxes (using Macromedia's Dreamweaver software) and links to these boxes in the form of icons added to the main webpages. Similar links were created to all the referenced images through thumbnail-sized icons of each figure. Background colors, sidebar properties, and header and footer properties were set up in a file shared by all webpages so they could be quickly edited. If those properties needed to be changed, only one file needed to be altered, making formatting changes throughout the document very easy.

The most difficult part of the construction process was making all the components of the digital article compatible with the numerous browsers that potential readers might use. Although 85% of the population surfing the World Wide Web now uses Internet Explorer, many people continue to use Netscape Navigator and other lesser-known browser programs. We chose to make the article compatible with early versions of software to accommodate users who may be restricted in their ability to use the latest versions. The final article was given many trials by first publishing it on a server at University of Denver and then running around to many different types of computers with many different browsers to test the article and find bugs. Many were

found; for instance, Netscape 6 and 7 would not load some of the animations, and other browser software scrambled some text in headers and footers. This necessitated a minor amount of rewriting of the some of the HTML code. We were not able to do all of the code debugging ourselves and so relied upon the kindness of various local "web nerds" to figure out where the bugs resided. (Hopefully, all were found before publication. Any additional bugs, once reported, will be corrected—with most readers none the wiser.)

General Guidelines for *e-tiquity* Authorship

There is no question but that there is a certain "learning curve" for the production of digital manuscripts. Submissions to *e-tiquity* will take the form of collections of text files, graphics files, and files in other formats (with a conservative approach to "standards" such as Macromedia Flash and other animation formats). Publications can be submitted either by uploading them to a server and providing access or burning them to a compact disk (CD). Peer review is anticipated as being completely digital, with reviewers specifying their preferred formats.

Among the basic requirements for authorship include some knowledge of HTML (or help from a qualified assistant). Information about coding can easily be found online from sources such as "A Beginners Guide to HTML" from the National Center for Supercomputing Applications (http://archive.ncsa.uiuc.edu/General/Internet/WWW/), the HTML Writers Guild (http://www.hwg.org), and the HTML Goodies website (http://www.htmlgoodies.com). However, it is not expected that authors become webmasters! Easy-to-use HTML scripting software is widely available and includes programs such as Macromedia Dreamweaver, Microsoft Frontpage, and Netscape Composer (part of the Communicator software bundle). HTML files can also be created using features in Microsoft Word and the latest generations of other popular word processors. In most cases, creating attractive and effective webpages is no more difficult than generating word-processing documents or Microsoft PowerPoint presentations.

Digital images can be produced by drawing or scanning artwork or photographs using software such as Adobe Illustrator and Photoshop, Microsoft Image Composer, and other programs. For now, the preferred formats are JPEG, GIF, AVI, and MPEG, but other will be considered. At present, *e-tiquity* is not designed for Computer Graphics Interface (CGI), Structured Query Language (SQL), or Active Server Pages (ASP) interaction with server-based software. Contributions to *e-tiquity* should be considered "stand alone" publications that do not collect information or provide interactive access to databases. However, the unreviewed "author's links" can provide access to any additional information that the authors wish to provide—including feedback forms. Once a reviewed article is ready to "go to print," it is published by uploading the files to a server. Initial hosting for

e-tiquity is being provided by the Digital Library Initiatives project at the University of Kansas. In the future, its permanence will be a matter of file transfers. We fully anticipate that space and speed will only increase with improvements in digital storage and networking technology.

There is always a certain amount of risk in new ventures. One of the characteristics of software design is the concept of "backward compatibility." In the quickly changing world of the Internet, newer versions of software will almost always read earlier files. Furthermore, software manufacturers usually provide conversion routines that permit one to upgrade older files to newer formats. Any study of archaeology tells us that a wait for technology to "stabilize" is futile. Ultimately, in the world of scholarship, it is the users who keep resources alive. In traditional hardcopy media, this is a process apparent in the photocopying and reproduction of the unpublished dissertations, conference papers, and databases of our forebears. At a larger scale, it is the same process by which back issues of *American Antiquity* are now being digitized and made available through JSTOR. Each of us has a responsibility to ensure that our data—whether it be in the form of field notes, punch cards, tapes, or floppies—is properly archived. We hope that the SAA membership of the future will recognize the value of our early attempts at digital publishing and seek ways to preserve these resources indefinitely—if only as a documentation of our own history. Even Jefferson's historic excavations as reported in *Notes on the State of Virginia* (1781) are now available online (http://www.yale.edu/lawweb/avalon/jevifram.htm).

Conclusion

We hope that unknowable changes in new technology will not deter potential authors from making digital submissions. The power of publishing in this way far outweighs the potential drawbacks. The satisfaction inherent in being able to publish lots more of the "good stuff" of archaeology is uplifting and will only help our discipline to evolve. How many of us have had to forego publishing a valuable map or photo because of page and figure limitations? How many times has one had to choose a "representative sample" of images of sherds, points, or macrofossils when it would have been more useful to publish something closer to a true type collection? How often would it be useful to publish multiple views of an artifact or excavation, such as at different resolutions or with or without labels? What percentage of archaeologists have published *any* scholarly work in color? In digital publishing, most of what one wants to publish can be included without an article being cluttered, as images and other data are accessible at the reader's discretion. That said, *e-tiquity* is not a place for the "kitchen sink" approach, either. As with any peer-reviewed publication, there should be no elements that are irrelevant or extraneous to the scholarly content and presentation of a well-integrated argument or interpretation.

There are still many American archaeologists that either cannot or will not access the Internet. We are confident, however, that those who find the Internet useful to their research will find a way to access the information published there. We are also confident that the SAA will remain a reliable arbiter of the highest-quality research. There is a legitimate fear that an article that is not printed on paper will not be accepted as a "real publication" by department chairs, deans, or promotion-and-tenure committees. Unfortunately, this fear has begun to inhibit, rather than promote, innovative uses of technology that have always been fundamental to our discipline. We hope that the concept of what is "real" will change in the future, and we are willing to take a risk with this new medium, knowing full well some of the pitfalls that lie ahead. This is based in the belief that the potential benefits far outweigh the risks, and we hope future authors and readers will recognize this.

We are still on the gentle upward sloping part of the learning curve but confident that, with a reasonable amount of trial and error, we will learn as we go. *American Antiquity* looks very different today than it did back in the 1930s, and *e-tiquity* will also evolve as user needs, abilities, and archaeology itself change. At present, stylistic guidelines are open and flexible—within reason—and innovation is strongly encouraged. Submissions will be reviewed on the basis of scholarly merit and content as well as overall design. *e-tiquity* has the potential to revolutionize the way some archaeologists publish, but its success will ultimately depend upon the creativity of its contributors and the usefulness of what they produce. ▣

UNDERSTANDING THE TECHNOLOGY OF DEVELOPING WEB GRAPHICS FOR ARCHAEOLOGICAL CONTENT

Samuel Fee

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A s websites are increasingly used in the archaeological arena, aspects of design and implementation come to the forefront of any discussion regarding their utility. One issue of continuing concern is the speed at which web pages and their ancillary files are downloaded. Indeed, download speeds of larger graphic files remain one of the most formidable challenges facing the delivery of suitable archaeological content via the web. Because graphic images take considerable time to download, many websites tend to include truncated or shrunken images in an effort to decrease page-loading times. This practice results in web pages that compromise their visual impact as a trade off for faster downloading speeds—the visual content suffers, and the archaeological concepts become more difficult to understand.

Archaeological content typically needs large, detailed images to communicate concepts effectively—particularly to beginning students or laypersons. For instance, an archaeological website might employ larger images to display entire site plans or detailed photographic images that illustrate stratigraphic layers (Figure 1). Such images are crucial to understanding archaeological content and thus become important to any website that attempts to share such content with students or the general public.

As more archaeologists move their data to the web, the data transfer rates of appropriate graphical material becomes a challenge for web database delivery. In some instances, specific server-side solutions exist that can generate and manipulate custom graphics on the fly—resulting in faster transfer speeds. These solutions are typically open-source software or custom-developed applications that often can generate images of varying resolutions (usually selected by the user) from one source file. One such example would be the *Castle Rock Site Report* published by the Crow Canyon Archaeological Center (Kuckelman 2000). This online database delivers actual data records from the fieldwork, including photographs of specific artifacts and features, site plans, maps, and drawings (see Kuckelman article elsewhere in this issue).

While extremely useful, such powerful online database solutions typically require network administrator project direction or assistance. For many archaeology websites—those typically developed and maintained by archaeologists with limited time and resources—a more practical approach is needed. While a number of tools and techniques can be used to generate web resources that are relatively quick to load, the most significant improvement in download speed can be achieved by limiting the resolution and file size of graphical materials that appear on a web page. There are also software programs, most notably Macromedia Fireworks and Adobe Photoshop, that are

Figure 1: The OSU Excavations at Isthmia Web Site includes a number of large graphic files. Note also the numerous smaller graphics for navigation (Available: http://isthmia.ohio-state.edu/. Date of use: 18 October 2002).

capable of slicing larger images into numerous smaller graphic files and compressing them. In Figure 2, the page appears to be one large graphic file, with a few extra elements at the bottom. However, the image is actually a conglomeration of numerous slices held together in an HTML table (Figure 3).

Slicing the image into smaller graphics makes the page appear more quickly since the browser can download several smaller images at the same time. Nonetheless, compression of the graphic files is the key to faster-loading visuals, and such compression can be applied to all graphics to provide the fastest possible download speeds. Fortunately, software like Photoshop and Fireworks can compress graphic files or reduce their number of colors, which also decreases file size. These tools increase the value of the site by facilitating the use of a larger body of visual materials—a particularly valuable enterprise when developing archaeological content for delivery via the web.

Graphic Format Basics

To better understand the underpinnings of web-graphic optimization, a basic comprehension of computer graphics in general is useful. Graphics for the web come in two forms: raster or vector.

Raster graphics (also referred to as bitmap graphics) are made of a series of pixels, each requiring a set amount of memory. Thus, larger images with more pixels require more memory and come in larger file sizes. This also means that these images do not scale very well. As the pixels of the image get stretched and enlarged, jagged edges and distortion result. The raster format is most suitable for images with shadows, soft edges, detailed color shifts, and continuous tones (Weinman 1999).

Vector graphics, on the other hand, are not pixel-based. Rather, they are formed by mathematical instructions. These mathematical formulae remain the same regardless of the size of the image. As a result, vector images scale quite well, and memory requirements remain the same whether the image is large or small. The vector format is most suitable for illustrations, line art, type or type-formed images, and "flat-style" artwork (Weinman 1999).

Stated more simply, raster images are most appropriate for photographic representations. Illustrations, plans, type, and flat-style artwork, however, are better served by the vector format. Well-known image editors that generate raster graphics include Photoshop, DeBabelizer, and Paint Shop Pro. Common applications that generate vector graphics include Illustrator, Freehand, and CorelDraw. Macromedia Fireworks is specifically designed to generate web content and contains both raster and vector image-editing tools. Recent versions of Photoshop also support vector images, and Photoshop is now regarded as a graphic application that handles both raster and vector graphic development with equal aplomb. Photoshop and Fireworks, therefore, currently serve as the preeminent tools for web graphic development.

Graphic File Types for the Web

There are three dominant file types for web graphics: GIF, JPEG, and Flash. Each of these file types possesses its own benefits and limitations, and each is more appropriate for certain types of graphic development.

GIF FILES: The GIF (Graphical Interchange Format) file type is very flexible, allowing for "transparency," "interlacing," and limited animation. Transparency in a GIF image allows the background to remain visible within a selected area of the image. Interlacing allows a low-resolution version of the image to appear
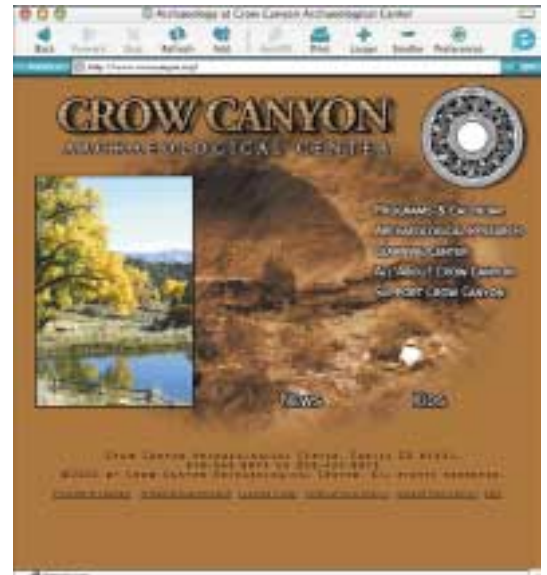

Figure 2: The Crow Canyon Archaeological Center home page (Available: http://www.crowcanyon.org/. Date of use: 20 October 2002).
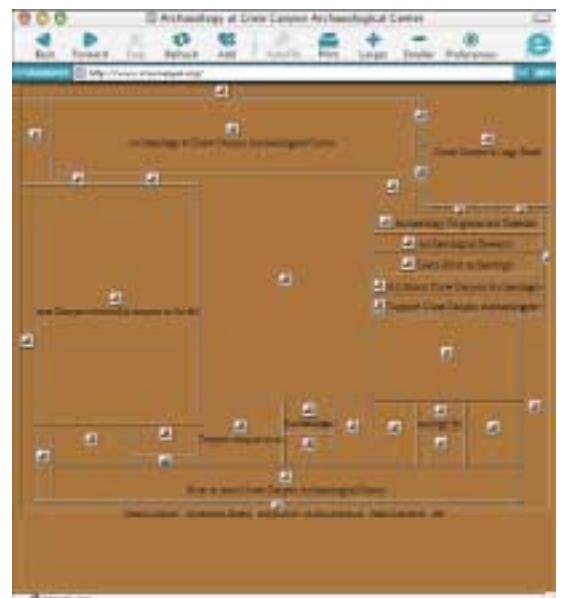

Figure 3: Behind the scenes of the Crow Canyon Archaeological Center home page.

and then improve as the rest of file downloads. Animated GIFs tie a series of individual images together to create short animations. For all this flexibility, however, the format does have some drawbacks. For instance, a GIF file can only contain 256 colors or less. This makes it better suited for handling graphics with solid colors, but less flexible for continuous tone images or photographs. For archaeological content, a GIF image would be the file type employed for site plans, topographic maps, ceramic illustrations, and the like.

When trying to make GIF files as small as possible for web publication, there are opportunities for adjustment by "dithering" and by lowering "bit depth." Dithering an image simulates a color missing from the 256-color palette by placing other pixels that are in the palette in close proximity to one another. There are varying techniques for doing this, each with varying success. But while dithering can produce a smoother image using fewer colors, it sometimes results in larger file sizes. A more effective way to reduce the file size of a GIF image is to reduce the number of colors contained in the file (also referred to as "reducing the bit depth"). After reducing the number of colors in the file, for example from 256 (8 bit) to 64 (6 bit), less data needs to be stored for each pixel, so naturally the file is smaller.

Fortunately, there are several commercial applications that make the task of experimentation with dithering and bit-depth less of a chore. Adobe Photoshop is one of these (Figure 4). By selecting "Save for Web" from the File menu in Photoshop, a user can select varying settings for color depth and dither and see any visible changes before saving the file. Such a tool makes it quite easy to consider the trade-offs between image quality and file size.

JPEG FILES: Another prevalent file type for web content is the JPEG (Joint Photographic Experts Group) format. This was designed specifically for digital photographic content and is best suited for continuous tone graphics. JPEGs also work well for detailed illustrations, for images with gradients, and it also effectively represents subtle shade changes (Element K Journals 2000). So-called "progressive" JPEGs also support interlacing. Because of such strengths, JPEGs are ideally suited for photographic content—a feature that is of considerable import for various archaeological applications of graphic material. While such images could be saved as GIFs, it would be difficult to match a photograph's colors with a palette of only 256 colors. The quality of the image as a GIF would not match that of a JPEG.

As opposed to the GIF format, a JPEG image can be compressed at various levels. This is the best way of limiting file sizes for the JPEG format. Simply adjusting the quality level while saving the file in any graphic program will result in greater compression—in other words, the lower the quality of the image, the smaller the resulting file size will be. As seen in Figure 5, an image with a quality setting of 12 (the highest) has a file size of 72.46k and will take an estimated 12.8 seconds to download via a 56k modem. However, the image with a quality setting of 6 (medium) has a file size of 19.5k and should download in an estimated 3.44 seconds—a considerable improvement. Of course, this information does not take into account the visible quality of the image. A small file size is of little value if the picture quality is too poor. Usually this can only be judged by looking at the images produced. The difference of quality is visible within the images in Figure 6. As the quality level decreases, the clouds become less distinct, considerable detail is lost in the shadows of the building, and the flowers begin to blend together.
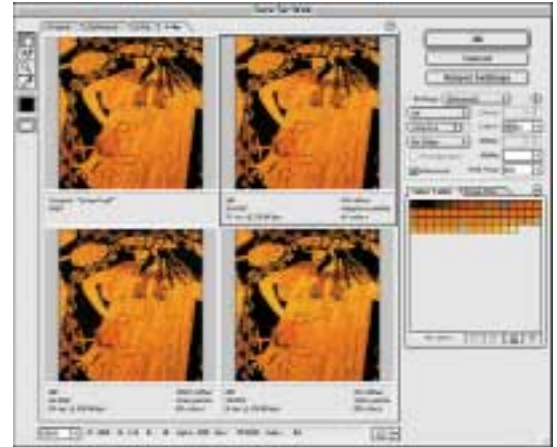

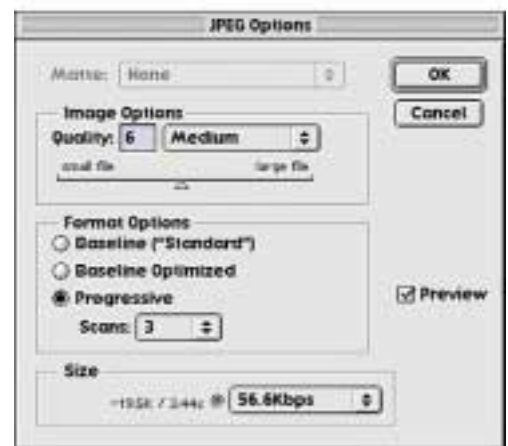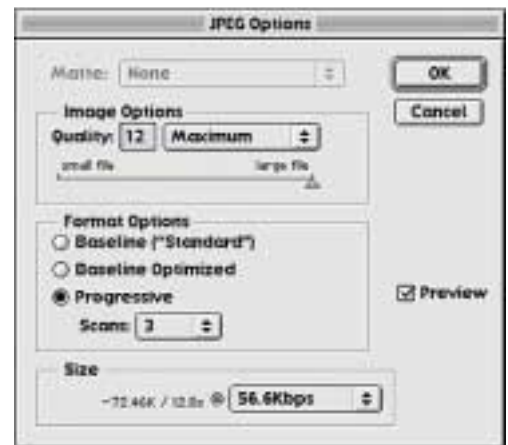*Figure 4: The Save for Web feature in Adobe Photoshop.*

Figure 5: Saving JPEG files in Adobe Photoshop.

Usually a quality level between 7 and 9 provides the best compromise between image detail and limited memory requirements.

Such a loss of quality can be an issue of significant consternation when trying to deliver visuals representing specific archaeological features. For instance, a photographic representation of stratigraphy that is saved at a low quality and loses so much integrity that the specific distinctions between layers cannot be identified would be of little value—even if it did download quickly. Fortunately, the "Save for Web" feature in Photoshop works for the JPEG format as well as it does for the GIF. This provides an easy way to review the visual quality of each setting before saving the JPEG file.

COMPRESSION: Although the GIF and JPEG formats are quite different and have different uses, one item that all file formats for the web have in common is compression. This compression creates the small file sizes that allow for faster transmission.

Figure 6: JPEGs of highest, medium, and lowest quality.

There are essentially two types of compression: "lossless" and "lossy." Lossless compression does not remove any of the image's data, and thus it will look the same whether compressed or decompressed. The GIF file format employs a compression scheme called "LZW," which is lossless. JPEG, on the other hand, employs a lossy compression scheme. With lossy compression, data are removed from the image—when compressing a JPEG image, data are essentially thrown away. For this reason, JPEG files should never be compressed more than once, since every time JPEG compression is employed, more data will be lost.

FLASH FILES: Flash is a software application that generates vector graphics and animation sequences. It was created specifically for the delivery of online content. A vector image is usually smaller than a raster version of the same image, and, as a result, they download more quickly. In addition to typical static images, Flash can be used to create complex animations and develop significant interactivity. Since it is a vector format, Flash is resolution independent—it will scale to the size of any browser with no loss of quality or functionality. Flash files also support the incorporation of sound.

Even with all this potential, however, several drawbacks to the Flash platform remain. The biggest concern is Flash's reliance on web-browser plug-ins. Although the newest browsers include native support for Flash, older versions still require plug-ins. This can be problematic for users that lack the plug-in and perhaps also the technical ability to download and install one. Flash development also presents an additional learning curve when compared to typical graphic applications. In part, this is the trade-off for increased functionality; however, it remains a formidable barrier for some. This makes it a more problematic tool for the archaeologist who would probably rather be in the field than sitting in front of the computer.

Concluding Thoughts

Archaeological content delivered via the web requires effective graphic images. Frequently, these images tend to be large and take a long time to download. Rather than sacrifice the utility of effective content, images can be modified to facilitate faster download speeds. As outlined in this article, there are several

GENDER AND ARCHAEOLOGICAL RESEARCH

A LOOK AT PAST AND CURRENT TRENDS

Karen G. Harry, Jodi Dalton, and Mark C. Slaughter

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Last spring, the senior author led a class seminar on gender issues in archaeology to incoming graduate students at the University of Nevada-Las Vegas. At one point, the class discussion touched on whether men and women tended to gravitate toward different research specialties. Although the authors of this article unconsciously assumed that such biases existed, to our surprise most of the incoming students were unaware that archaeologists tended to traditionally identify some subspecialties more strongly with one gender or the other. The students questioned whether our unconscious assumptions were correct, and—almost unanimously—they further raised the issue of whether (and why) it should be any concern if such biases did exist. As a result of that discussion, we decided to investigate publishing trends by gender. Our goal was to identify whether certain research domains were indeed dominated by one gender and to evaluate whether any gender biases that might exist were changing. We suspected, based on our own experiences, that men were more active in some types of analyses and women in others. We also suspected, as a result of the different perception held by the younger generation of archaeologists, that perhaps these trends were in the process of change.

To examine these issues, we recorded the primary authorship of articles published in *American Antiquity* (*AA*) from 1990 to the present. Because we were interested specifically in whether men and women were differentially drawn toward specific types of artifact analysis, we recorded data only from those articles that dealt primarily with analytical categories; theoretical, synthetic, and overview articles were not included. For each article reporting original research from artifact analysis, we recorded whether the senior author appeared to be male or female based on the first name. Those articles published under first name initials or having ambiguous names, and for which we could not otherwise determine the gender, were omitted from the database. After the omission of these articles, we were left with 506 articles.

Gender data were recorded for 13 research categories (Table 1). These include flaked stone, ceramics, faunal remains, human remains, macrobotanical remains, architecture, iconography, shell, rock art, pollen and phytoliths, groundstone, textiles, and "other." The latter category consisted of all artifact analyses that did not fit into one of the other categories, and included such research domains as coprolites, minerals, figurines, and metallurgy.

General Patterns

As we expected, we found that men and women were not equally represented in all specializations (Figure 1). The most striking disparity in the gender of senior authors occurred in the field of flaked lithics. Of the 140 articles published on flaked lithics since 1970, men have published 87.9 percent. This percentage is greater than the 77.7% overall authorship rate by men, and is statistically significant, as determined by a binomial test ($p = .003$). Research areas disproportionately represented by women include groundstone (all five articles were written by women), textiles, rock art, iconography, and pollen or phytoliths, although none of these differences was statistically significant (at the $p = .05$ level), possi-

Table 1: Number of Articles Written per Decade, by Data Type and Gender of Senior Author.

Type of Data	1970-1979 M	1970-1979 F	1980-1989 M	1980-1989 F	1990-1999 M	1990-1999 F	2000-2002 M	2000-2002 F	TOTAL M	TOTAL F
Flaked Stone	29	2	48	8	40	6	6	1	123	17
Ceramics	21	3	18	5	29	11	2	2	70	21
Faunal	15	1	13	5	20	4	6	1	54	11
Human remains	2	2	11	4	11	5	6		30	11
Macrobotanical	3	1	10		11	8	2		26	9
Architecture	8		7	3	6	4			21	7
Iconography		3	8	3	1				9	6
Shell	3	1	7	1		1			10	3
Rock art	1	2	3		2	1		2	6	5
Pollen/phytoliths	1		3	2	2	2			6	4
Groundstone						5				5
Textiles		1			2	1			2	2
Other	2	2	17	2	14	7	3	1	36	12
TOTAL	85	18	145	33	138	55	25	7	393	113

bly because of the small sample sizes.

Some of the findings were unexpected. For example, although other studies have found that women are more likely to specialize in ceramic analysis than men (see Zeder 1997:125–126), this study failed to identify any significant gender differences. Overall, men have published more than three times as many articles on ceramics as have women. Even more relevant, the proportion of the ceramic articles written by men (76.9%) is nearly identical to the proportion of all articles written by men (77.7%).

Also unexpected were the overall patterns noted for zooarchaeological and macrobotanical publications. Both of these subfields have traditionally been strongly identified with women analysts (see Clifford-Gonzalez 1994; Gero 1991). Of those articles dealing with zooarchaeological remains, 83.1% were written by men and 16.9% by women. Articles dealing with macrobotanical analyses were also written primarily by men (74.3%). Although these figures do not depart substantially from the overall proportion of male-authored articles, they were unexpected in subfields traditionally identified with women analysts.

For those articles dealing with ceramic and lithic data, we recorded whether the analyses involved archaeometric methods (including sourcing techniques, residue analysis, and other). Overall, 42.3% of the male-authored papers and 52.9% of the female-authored papers on lithics reported on archaeometric methods. Of the papers written on ceramics, 48.9% of the male-authored and 29.4% of the female-authored papers dealt with archaeometry. These data suggest that whereas women lithic analysts are slightly more likely to use archaeometric methods, women in ceramic analysis are more likely to report upon data obtained from stylistic, technological, or some other form of analyses.

Trends over Time

Some of the analytical categories show distinct changes over time in the proportion of articles written
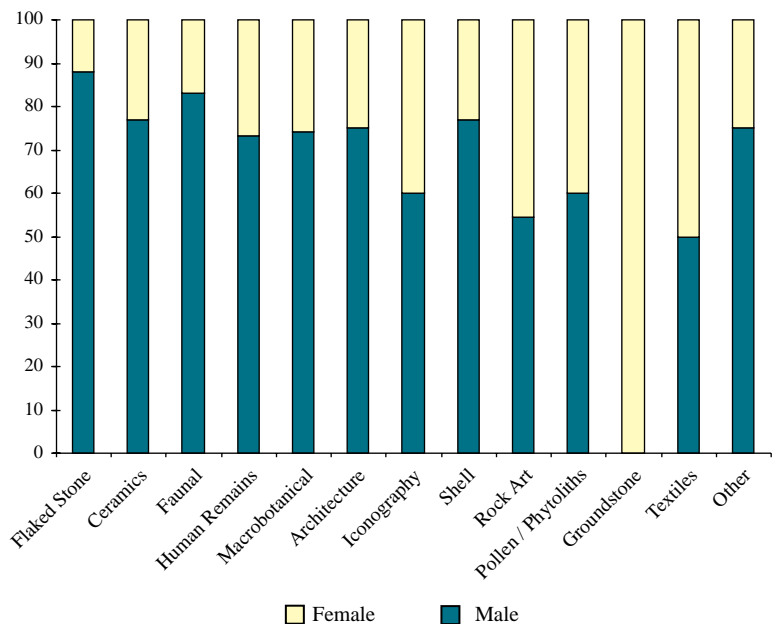

Figure 1: Proportion of American Antiquity articles by gender, 1970 to present.

by men and women (Figure 2). Most notably, women are now writing a much higher proportion of the articles about ceramics. For example, men wrote 87.5% of the articles on ceramics during the 1970s, but only 72% of the 1990s articles and only half of those published so far this decade. This trend seems to reflect an overall increase in publishing by women, rather than any gender differences in who is drawn to (or encouraged to) specialize in ceramics. Notably, with the exception of the current decade (the small sample size of which suggests we should interpret those patterns with caution), the proportion of ceramic articles written by men is nearly identical to the proportion of all articles written by men.

Perhaps the most striking pattern is the lack of temporal trends in flaked stone analysis. In each decade examined, women have published in flaked lithic analysis at lower-than-expected rates when compared to their overall publication rates. For example, in the 1970s, 6.5% of the flaked lithic articles were authored by women compared with 17.5% of all articles. In the 1980s, this figure jumped to 16.7% compared with an 18.9% publication rate; but in the 1990s, this figure was back down to 13.0% compared with a 28.5% publication rate. In this decade, so far, women have published 14.3% of the papers on flaked stone but 21.9% of all articles.

Figure 2: Proportion of American Antiquity *articles written in each decade, by gender and research specialty.*

What Do These Patterns Mean?

One question that may arise is whether the publication rates accurately reflect the gender composition of the specialties. The answer to this question is beyond the scope of this paper, but there are some suggestions that, at least for some specialties, they do not. In a 1994 survey of SAA members, Zeder (1997:Figure 5.9) found that men were only slightly more likely than women to report lithic analysis as a research specialty. Using data obtained from five SAA annual meetings held in the 1980s, Gero (1991) determined that women submitted 37% of the contributed papers on lithics at those meetings. In contrast, our data indicate that during the same decade, women were senior authors of fewer than 15% of the papers on flaked stone published in *AA*. These patterns suggest either that women lithic analysts are less likely to submit articles to *AA* or that they are less successful in having those articles published.

Similar patterns obtain for other specialties. For example, whereas women wrote 27.8% and 16.7% of the faunal articles during the 1980s and 1990s, respectively, Gifford-Gonzalez (1994) reports that women constituted 36% of the archaeologists identifying themselves as faunal specialists in the 1991 *American Anthropological Association Guide to Departments* and more than half of the 1989 subscribers to the *Zooarchaeology Research News.*

Do These Data Matter?

Do gender differences in archaeological analysis and publishing matter? Or, as suggested by the students in the graduate seminar that inspired this study, are they of little consequence? We suggest that understanding gender patterns are important for two reasons. First, as Gero (1991) has demonstrated, men and women have different ways of exploring human behavior and constructing knowledge about the past. Whereas male lithic analysts have tended to focus on hunting technology, for example, women have emphasized the study of expedient, nonstandardized tools used in plant processing and other nonhunting contexts. For our discipline to thrive, it is essential that we encourage diverse views in all of the research domains. Second, the possibility that women analysts in some fields are publishing at disproportionately low rates deserves additional investigation to understand the reasons behind this pattern. ▣
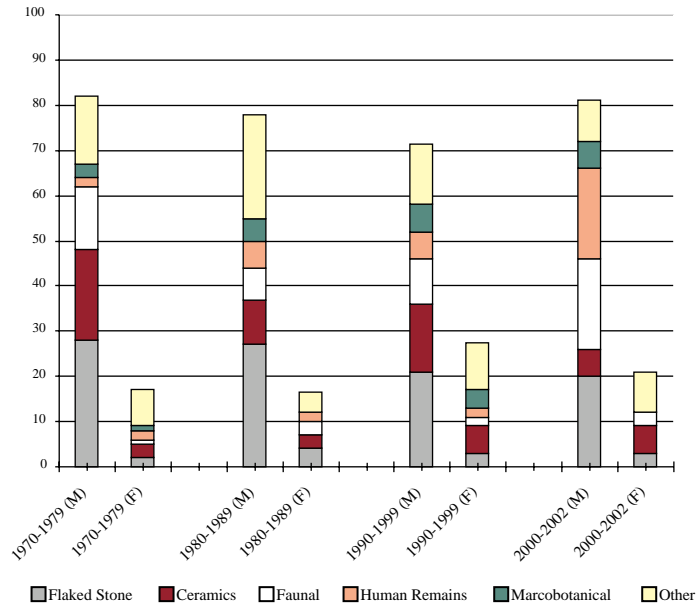
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TRENDS IN THE GEOGRAPHIC FOCUS OF AMERICAN ARCHAEOLOGY

AN ANALYSIS OF *AMERICAN ANTIQUITY* ARTICLES AND PH.D. DISSERTATIONS

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As the flagship journal for archaeology in the Americas, *American Antiquity (AA)* represents the leading wave of method and theory in this hemisphere. Articles appearing in the journal often set the stage for later developments, serving to bring new ideas, methods, and data to a broad audience. In this respect, the journal plays a major role in structuring change in archaeological thought.

This study began as an inquiry into how the archaeology of different regions contributes to the development of the field. My sense was that certain areas were better represented than others and that their importance had changed through time. Other than studies by Feinman et al. (1992) and Chamblee and Mills (2001), which examined the regional focus of papers presented at SAA meetings, I knew of no similar work examining this topic. Ultimately, this study stemmed from my own interests in the archaeology in California and the Great Basin, which I felt had moved in a different direction than regions such as the Southwest and Southeast. I focus here on a more general question: How well have different regions been represented in the pages of *AA* since its inception in 1935/1936?

Methods

The geographic foci of all research articles and reports appearing in *AA* from Volume 1 through Volume 65 were tabulated; comment articles are excluded. I defined 11 major regions, including eight in North America (Northwest, California, Great Basin, Southwest, Plains, Southeast, Northeast, and Arctic), South America, Mesoamerica (including Central America), and anything else. These divisions partially reflect my own biases and interests, since I am more familiar with the archaeology of the Western US, and in hindsight I should have divided the Plains, the Northeast, and the Southeast into at least two subregions each. Figure 1 shows how I subdivided North America.

AA articles sometimes self-identify a region of focus within the title or abstract (this is particularly true in the earlier history of the journal). However, often I had to skim through the article to determine from which region the data were derived. Some articles had no specific regional focus or were focused on more than one region. In the former case, I assigned the article to a "general" category; in the latter, I assigned a fraction of a point to each region (e.g., one-half if two regions were represented, one-third if three).

Results

The study compares the percentage of articles representing different regions through time. Thus, this is a zero-sum exercise, and an increase in the percentage of articles from one area necessarily causes a decrease in others. Figure 2 shows the percentage of articles from each region in 5-year blocks of time.

Most dramatic in Figure 2 is the rise of Mesoamerican/Central American articles from a minority of less than 10% in the first 20 years of the journal to over 25% between 1956 and 1985. A similar rise is seen among South American articles, which rise steadily from the inception of the journal through 1970, at which point they decline slightly. Following the introduction of *Latin American Antiquity (LAA)*

in 1990, the representation of these two areas declines sharply in *AA*, such that each represents less than 3% of all articles between 1996 and 2000, even though Mesoamerica continues to dominate papers presented at the SAA meetings (Chamblee and Mills 2001).

Another notable trend is the dramatic growth in "general" articles. After a decline between 1940 and 1950, these articles increased greatly between 1960 and 1980 and have remained high, accounting for 20% of all articles in the last 20 years. This is surely a reflection of the rise of processual archaeology over the culture-historical approach in American archaeology and the concern with more general issues of culture process (Willey and Sabloff 1993).

The rising popularity of Latin American and general articles comes at the expense of most North American regions, especially the Southwest, Northeast, and Southeast. The former two dropped from representing 24% and 17% of articles in the first five years of the journal to less than 10% each by the 1970s. Notably, three regions did not decrease during the rise of Latin American articles. Old World articles steadily increased from a nonpresence before 1955 to approximately 8% by the early 1980s, and they have steadily contributed between 6% and 8% of all articles since that time. The only North American regions that fared similarly well are the Great Basin and, to a lesser extent, the Plains. The Great Basin attains its all-time high in the 1960s and 1970s but drops significantly after 1980, while Plains articles remain relatively high between the late 1940s and 1960s, before decreasing significantly between 1970 and 1980.

More recently, the migration of Latin American articles to *LAA* has promoted a rebound in the representation of most North American regions. This is particularly pronounced among Southwestern articles, which nearly tripled during the 1980s and the 1990s. However, the same can not be said for Arctic, Great Basin, or Old World articles, and articles focusing on California and the Plains have increased only slightly. The real increase is among articles dealing with topics in the Southwest, and to a lesser extent the Northeast and Southeast.

Discussion

Given the large changes in regional representation, I found myself asking what factors were responsible? For example, what led to the dramatic rise in the number of Southwestern articles since 1981? Surely the answer to this question is complex. In the sections below I consider some potential factors.

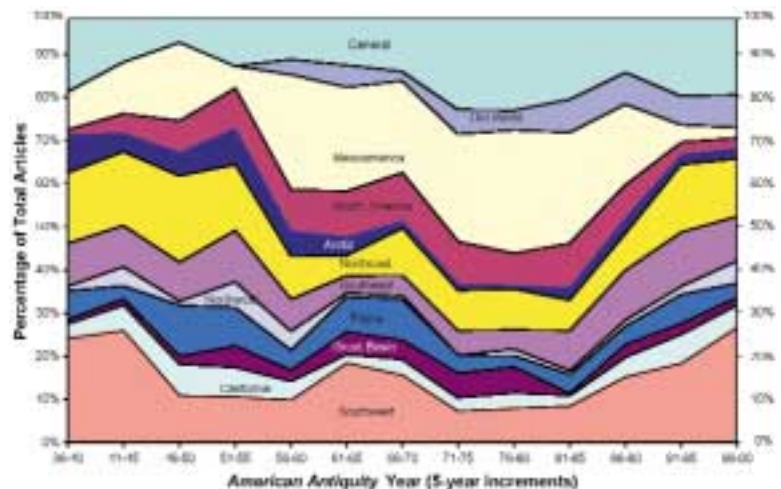*Figure 1: North American regions examined in the study.*

Figure 2: Representation of different regions in pages of American Antiquity.

Table 1: Inception date of regional journals and effects on representation in *American Antiquity*.

Journal	Year Started	Region	Prior 10 yrs.	Subsqnt. 10 yrs.	11-20 years after
Journal of Southwestern Anthropology	1945	SW	23.7%	10.7%	14.9%
Plains Anthropologist	1954	Plains	9.1%	6.5%	6.4%
Arctic Anthropology	1962	Arctic	6.8%	2.6%	1.1%
Pacific Coast Archaeological Society Quarterly	1965	Calif.	4.2%	3.4%	3.0%
Northwest Anthropological Research Notes	1967	NW	2.0%	0.4%	1.5%
Man in the Northeast	1971	NE	8.0%	8.8%	12.6%
Archaeology of Eastern North America	1973	NE	9.9%	8.0%	9.5%
Journal of California Anthropology	1974	Calif.	3.3%	3.1%	4.8%
Journal California & Great Basin Anthropology	1978	GB	4.1%	1.5%	2.7%
Southeastern Archaeology	1982	SE	5.0%	11.1%	12.5%
Ancient Mesoamerica	1990	Meso.	24.2%	3.2%	n/a

Notes: yrs. = years; Subsqnt = Subsequent; Calif. = California; Meso. = Mesoamerica; n/a = not available.

EDITORSHIP. The editor has ultimate decision-making power over which articles are accepted. In this sense, she or he can influence the direction of the journal and how different regions are represented. An editor could subconsciously promote or reject publication of articles in the same region in which he or she works. Authors also might see an editor as sympathetic to a particular region and be encouraged to submit articles.

The data show that under some editors, representation of their own regions of interest increased, while under others it decreased. For example, during the editorships of Jesse Jennings (ca. 1951–1954) and Jeremy Sabloff (ca. 1978–1981), the number of Great Basin and Mesoamerican articles, respectively, increased slightly. Yet under Robert E. Bell (ca. 1967–1970), the number of Plains articles decreased. In all cases, the changes are slight. There does not seem to be any systematic influence by *AA* editors.

REGIONAL JOURNALS. As discussed above, the introduction of *LAA* had a visible impact on the representation of Latin American articles in *AA*. I began to wonder if the introduction of other regional journals had impacts as well. Table 1 lists the journals examined in this study that were started after 1935.

In many cases, the beginning of a regional journal is preceded by a rise in the number of articles representing that region in *AA*, suggesting that many regional journals are the outgrowth of an increase in publishable research. The commencement of such a journal clearly attracts articles away from *AA*. Almost every time a regional journal begins, there are fewer *AA* articles representing that region over the following 10 years. In most cases, the number of articles increases again after 10 years. Perhaps as regional journals stimulate interest in various topics, or as certain regional issues are resolved, articles are directed again toward *AA*.

This result is not terribly surprising. However, it illustrates the effects that regional journals have on the national visibility of each region's archaeology. They clearly reduce visibility following their inception but may stimulate more research down the line, at least as measured in the pages of *AA*. Thus, regional journals likely have *some* influence on the representation of different regions in *AA*.

PH.D.S. The number of *AA* articles on a particular region must be related to the total amount of research carried out in that area, and one measure of this might be the number of dissertations focusing in each region. Many articles appearing in *AA* are either directly abstracted from dissertations or represent additional research based on dissertation data. Although research generated in the context of CRM is increasingly contributing to the journal, I could not think of any systematic way to estimate the quantity of such work.

I gathered data on all archaeology Ph.D. dissertations awarded from American universities prior to 2001 that are on file with University Microfilms (UMI; ProQuest). Beginning in 1975, most dissertations in the UMI database self-identify by subject area. For earlier dissertations, I downloaded all those containing the words "archaeology," "prehistoric," "lithic," "ceramic," or any cognate thereof in the title, filter-

Table 2: Comparison of dissertations and *AA* articles.

Region	Total Ph.D.s	Total *AA* Articles	Standardized Residual[1]	Correlation Coefficient (5-year blocks)[2]
Arctic	104	73	-0.02	0.33
California	78	90.3	0.50	-0.51
Great Basin	76	69.8	0.25	-0.06
Mesoamerica	495	375	-0.67	0.09
pre-1990	264	355.5	1.72	0.02
Northeast	503	236.5	-2.51	-0.13
Northwest	95	43.3	-0.29	-0.44
Old World	1670	92.5	n/a	0.90
Plains	114	117	0.42	0.53
Southeast	215	171	-0.05	-0.08
South America	228	156.5	-0.38	0.22
pre-1990	122	143	0.66	0.24
Southwest	**328**	**306**	**0.37**	**-0.46**

1. Residuals for regression on columns 2 and 3, removing Old World. Positive residuals indicate more articles in *AA* than expected given total number of dissertations; negative residuals indicate fewer articles.
2. Correlation coefficients between percentage of Ph.D.s and percentage of *AA* articles in 5-year blocks of time. Positive values indicate that increases in Ph.D.s corresponds with increases in articles.

ing out all irrelevant theses (e.g., pertaining to geology or materials science). Searching only for these specific words may introduce bias (e.g., for lithic- and/or ceramic-bearing regions); however, I felt that these four keywords would retrieve a representative sample of dissertations. Based on the title, each dissertation was coded for a regional focus, using the same 11 regions defined earlier.

Together, the database contains over 4,000 titles published between 1940 and 2000. However, 88% of these date after 1974, and 97% after 1960. Indeed, the number of archaeology dissertations has grown steadily between 1975 and 2000, having nearly doubled from just over 100 per year in the mid-1970s to nearly 200 a year by the late 1990s. Given the scarcity of pre-1961 dissertations, the analysis focused on the period between 1961 and 2000.

Table 2 lists the number of dissertations and *AA* articles in each area. There is a linear correlation, indicating that more dissertations in an area correlates with more *AA* articles. Regression residuals listed in Table 2 show which regions are over- and under-producing *AA* articles, given the number of dissertations produced. For example, the number of Mesoamerican articles is far more than would be expected (see column 4), particularly when we limit the analysis to before 1990 (when *LAA* started). To a lesser extent, this is also true of South America, the Plains, California, and the Southwest. On the other hand, articles from the Southeast and especially the Northeast are under-represented in *AA*.

Does an increase in the representation of dissertations from an area correlate with an increase in related articles in *AA*? Figure 3 examines the regional focus of dissertations through time. If there is one clear pattern, it is the steady increase of those covering the Old World, and the number of Old World articles in *AA* increased over this same period. The rise in popularity of this region comes at the expense of most others, with the exception of the Northeast and Mesoamerica. The percentage of Northeast dissertations increases steadily between 1960 and 1985 before falling again, and Mesoamerican dissertations show a steady increase between 1990 and 2000, consistent with results reported by Chamblee and Mills (2001) for SAA annual meeting papers. However, *AA* articles from these two regions do not follow the trends in dissertations. In fact, few areas display significant correlation coefficients (Table 2), suggesting that the percentage of dissertations and *AA* articles do not rise and fall together.

Significantly, there is no comparable rise in the percentages of dissertations focusing on the Southwest from 1975 onwards, quite unlike what is seen in *AA*. If anything, the percentage of Southwestern dissertations has decreased since 1980 (though rising slightly between 1995 and 2000). This relationship is

indicated by the negative correlation coefficient in Table 2. Similarly, there is a slight negative correlation in California, the Northwest, the Southeast, and the Northeast. In sum, although the percentage of Ph.D.s dealing with different regions has some influence on *AA* articles, for the majority of regions there is little correlation. This factor, then, only partially explains the trends in *AA* noted earlier.

Conclusions

It appears that *AA* editors, regional journals, and dissertations have only marginal effects on the representation of different regions in the pages of *AA*. What, then, accounts for the changes seen in Figure 2? For example, why did Mesoamerican articles become so popular beginning in the second half of the 1950s, and why have Southwestern articles become so dominant over the last 15 years?

Figure 3: Representation of different regions among Ph.D. dissertations from North American universities.

My feeling is that these trends are, in part, explained by factors that are more difficult to quantify. First, the development of core groups of researchers who promote healthy and friendly competitiveness may lead to collaborative efforts that produce innovative ideas likely to make the pages of *AA*. Such groups also may create academic climates where publication in journals is the norm. As individuals from these groups acquire university jobs and develop graduate programs, they probably promote this value system, passing it along to their students. In other words, the development of a vibrant community of researchers in an area must influence both the quantity and quality of publishable research. Other regions may lack a similar climate where research and/or publication is as encouraged.

Second, the success of recent doctorates in obtaining academic appointments at research-oriented universities must also be important. For example, if Southwestern and Mesoamerican archaeologists are more successful in obtaining jobs at institutions where publication is required, we would expect an increase in the number of articles focusing on those regions. In some ways, such success may be self-perpetuating. If research in an area is being published at a high rate and receiving a lot of national attention, universities may feel it important to have an archaeologist working in that area on staff.

Finally, the uniqueness of the archaeological record may also play a role. Although my knowledge of Southwest and Mesoamerica is limited, I am always amazed by the fineness of temporal resolution as a result of tree-ring dating and the ability to decipher hieroglyphs. These factors allow archaeologists to ask different and more detailed questions, pushing the limits of theory and method. Such resolution is simply not possible in other parts of the Americas. These factors may contribute to the attractiveness of these areas, pulling in more archaeologists and generating more innovative research.

Should these trends be of concern to archaeologists working outside the Southwest or Mesoamerica? If hiring practices at universities are related to trends in *AA* articles, those seeking academic appointments might be concerned if they work in areas with low representation in *AA*. Those judged by the visibility and popularity of their work, especially for career advancement, might be concerned. Some institutions, for example, use the Web of Science (http://www.isiknowledge.com) to measure citation
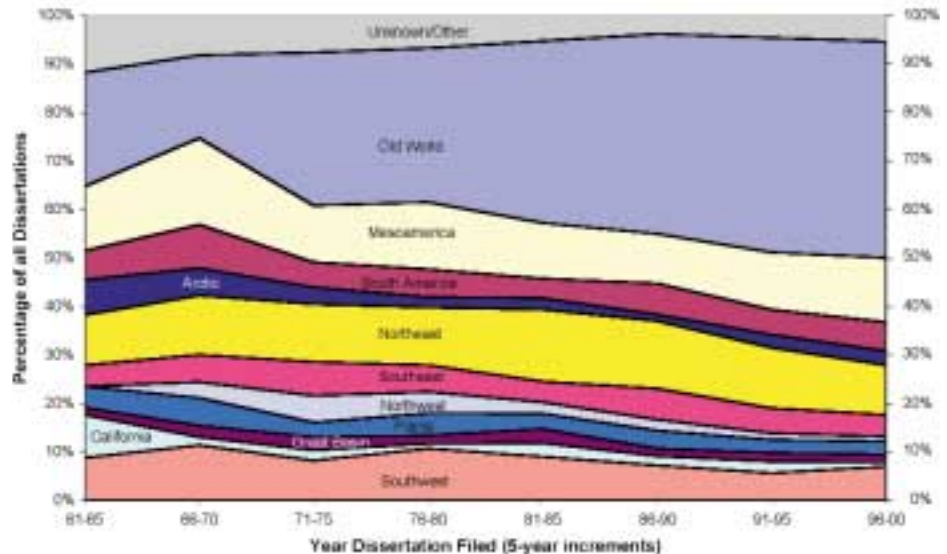
PUBLISHING TRENDS IN APPLIED NEW MEDIA

INTERNET ARCHAEOLOGY AS A SOCIALLY CONSTRUCTED COMMONS

Brian William Kenny and Matthias Giessler

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Can anyone examine the archaeology sites that inhabit the Internet and the World Wide Web and claim they represent some type of revolutionary "applied new media" that exists in sharp contrast with an older-style academic media? Those who would affirm "progress" by promoting the new style over the old might be surprised to learn that the underlying principles that structure traditional American archaeological practice are still in play. These principles largely determine what information is available for dissemination, both in print and electronically.

Archaeology is a social movement that operates to secure and enlarge a commons that focuses on historic preservation and interpretation of the past. As such, archaeology is as organic as any human endeavor and not a mere abstraction of our global service economy. The archaeological commons is founded upon the socially constructed realities of self-interested actors who are tied together by personal bonds and who operate to consolidate "social capital" (cf. Putnam 2000)—and redistribute shares of it—over the course of professional careers. This commons cyclically shrinks and grows over time, and it sees both a measure of comedy and tragedy in its daily operations. While there is hope for cooperation and success in strengthening the social movement to preserve and interpret the past, one can also find conflict and market failure in the archaeological commons (Hardin 1968, 1985). The symptoms of success and failure manifest themselves in the dissemination of information.

These are the very quotidian conditions and issues we acknowledge—and digitally conspire to put before you every day—via the "SWA" (Southwestern Archaeology) website (http://www.swanet.org/).

The Tragedy of the Commons, Conflict and Market Failure

The public is largely excited about prehistory and history packaged in popular formats. They consume record numbers of coffee-table books and magazines about archaeology. Television shows and Hollywood movies occasionally depict archaeologists in a realistic manner, and the public loves the idea of these earthy but erudite scientists taking to the fields of discovery. Avocational archaeologists and archaeological "groupies" of all stripes attend the annual Pecos Conference (and other conferences) in record numbers. Internet sites, listservs, web "blogs," and chat groups offer a grand mix of pure science reportage and untempered speculation.

Public archaeology—if not a little misguided—seems downright exciting to be around these days, and professional archaeologists have jumped right into this mix with great élan in hopes of raising public standards. This is where we find the comedy of the commons.

Cultural resource management ("CRM" or "contract") archaeology, despite its wage-earning capacity, can be publication hell—whether CRM publications are presented via the Internet or through the more traditional channels of printed publications. The problem is *not* that archaeologists substitute jargon for readable English but that archaeologists operate in contractual management systems that emphasize competition, time conflicts, the lack

of trust, and an over-reliance upon digging ("testing" and "mitigation") at the expense of intensive archival research and thoughtful preservation works.

In addition, archaeologists and their contract partners are often fearful of many things. They often applaud coercive regulation that permits or denies access to archaeological resources because archaeological sites can be destroyed rather easily. Archaeologists worry excessively over contractual time constraints but often fail to deploy technologies and managerial processes that might streamline the compliance review process. When reports are vetted in a timely and judicious manner, they tend to be hoarded and protected by archaeological managers and their partners who believe that information is dangerous in the hands of anonymous strangers.

Through our SWA website, we have found that people want some degree of anonymity when seeking information from archaeologists or from the government. In other words, customers desire relationships built around well-defined sets of needs while avoiding individual information-user profiles. Most of the requests for information we receive focus on issues of location: Where can I find information about Hohokam canals? Where can I go to participate in a dig? Where is there information available on the past performance and quality of the contractors whom I might need to hire?

The public need for information is vast, but agency websites and web publishing can be downright moribund. State Historic Preservation Office (SHPO) websites readily offer up the latest trends in morbidity, but they can hardly claim the top title. We have found that many government websites are reticent to provide email addresses and web-based inquiry services. Phone numbers are provided because government archaeologists want to know who you are—and how you are connected to them—before they are willing to share their information with you.

We do not disclose this sad state of affairs in any pernicious way. We simply note for the record that the management systems currently deployed by archaeologists and preservationists in government tend to make the archaeological commons more rivalrous, exclusive, and self-interested than civic and encompassing (Ostrom 1990). The very institutions that proclaim their desire to provide assistance to the public also sap the hope for meaningful archaeological publishing via the Internet.

We feel that this might be a market failure of the worst kind. The archaeology commons are marketed as a public good, but archaeological professionals make money or accrue authority by taking public goods from the commons and privatizing them. When push comes to shove, the need for exclusiveness of control and coercive government regulation will always trump any arguments archaeologists make for bridging inclusiveness in public archaeology or new media publication.

Socially Constructed Reality and Social Capital in New Media Publishing

Where professional archaeologists succeed in using the Internet as a form of new media publishing, one finds great care taken to address the ethical concerns and expectancies of peers (Garfinkle 1963). Archaeologists operate in social environments that depend on trust, and, in this sense, the professionals who inhabit the world of archaeology are very tribal.

Archaeologists in the arid American West have great opportunities to expand the commons of the interpretive past through new media publishing. They have a highly interested public ready to spend money on tourism, exotic archaeological districts that are highly visible on the landscape, and a large population of American Indians with whom to cooperate to extend both the scientific and social spheres of these overlapping communities.

Unfortunately, American archaeologists define their self-interests very tightly (often moralizing their position), so it is no surprise that professional archaeology sometimes seems like the game theory model known as the Prisoner's Dilemma (Axelrod 1984), where everyone is invited into the commons to cooperate with archaeologists, but defection is rampant. Furthermore, there is still a rather strong utopian flavor of American exceptionalism and realism (cf. Matarese 2001) in the archaeological publications of the American Southwest. While professional archaeologists have always had an eager public—and both helpful and contentious partners—we have not always been as good as we might be at checking rhetoric and integrating our regulatory-derived publications and new media venues to build social capital and promote cooperation.

If new media publishing is to succeed professionally, archaeologists will need to become more like ethnographers

and tell compelling stories that might help others understand exactly how archaeologists represent themselves and what it is they really do. When telling stories via new media venues, it is important to remember the problem we have with the "Disneyfication" of the imagined past by the mass media. Our publications still need to focus on the reality of time's arrow and the importance of material culture and in situ physical and cultural contexts.

As self-interested actors involved in social movements and collective action, new media archaeologists must be ready to grind out their daily bread. The times are different from the early 1990s when everyone got a browser and got online, only to see new media efforts stall out. Today's webmasters must become responsible for knocking down some of the "strong ties" that bind our profession in order to substitute the "strength of weak ties" (Granovetter 1992) and recover from the various gaffes and gaps we describe. Somehow, we must enlarge the shadow of the future and change the payoffs that so often incite free riders to shirk responsibility and defect from the commons. New media publications will succeed best where webmasters (and the institutions that sponsor them) perform their work out of personal *obligation to community* to help promote greater diversity and build new forms of community-based social capital.

As a note of caution, our experience with new media publication informs us that reciprocity sometimes comes in unusual ways, and sometimes not at all. We fondly remember a New Mexican archaeologist who did not like how SWA handled a particular situation. Fearing (unreasonably) that s/he had been harmed, a demand was made that we best act to satisfactorily resolve the matter, or *"will I have to hate you forever?"* Given such strong sentiments about our work, we must add: forever is a really long time to discount social capital in archaeology, so you are damned if you do and damned if you don't! (We've printed the email and enshrined it with lamination as a cautionary reminder to ourselves about the costs of social capital [cf. Coase 1960]).

Tools for the Future

When the public thinks of American archaeology, they think mostly of American Indian archaeology. We don't dispute the need for such emphasis, but we take a slightly different focus with the Southwestern Archaeology (SWA) website. We have discounted the regulatory hurdles of contract archaeology, and we focus on the ethnography of archaeologists in their native habitats. Given the conditions we noted in the historic preservation commons, such a focus is the easiest way to conduct new media ventures at this early stage. We have serious intentions. We want to know how groups of interdependent archaeologists might best organize to govern themselves and obtain continuing joint benefit from the historic preservation commons, when all participants face temptation to free-ride, shirk, or otherwise act opportunistically (Olson 1982).

Our efforts with new media publishing help us to reduce our puzzlement over some of the socially constructed strangeness that we have experienced with professional archaeology over the past two and a half decades. What we learn, we try to share as widely as possible. Our intended audience is not kids, nor avocational archaeologists, although we have invited them along for the adventure as they see fit to use our website. We really use the web to talk with professional archaeologists about archaeology in all of its permutations and manifestations.

SWA's daily email-based newsletter tries to grind out subjects that are both dear and close at hand, as well as "concept far" materials that might help us reframe our world. Our newsletter name and logo inform the world that irreverence and humor still play a role alongside serious business. If clowns can dance with *katsina* in village plazas throughout the Southwest, then journalism, archaeology, and commentary should mix on the web.

Our home page makes some claims about the American Southwest:

> The archaeologists of this region celebrate a diverse mix of people and their cultures, the in-situ preservation of sites and artifacts, and the greater scientific appreciation of these elements within their cultural, biological, and spatial contexts . . . [while, the SWA website celebrates] . . . the detailed technical methods of anthropological and archaeological work; the politics of preservation and the requisite transparency of consultation; the challenges of exploration and the weighty responsibilities of discovery; the business of satisfying the information needs of resource managers; the shaping and guiding of the experiential needs of diverse customers; and ultimately, the scientific, cultural, and administrative principles by which archaeologists working in the Greater Southwest come to understand and explain their efforts. This website is about the daily advancement of science and public archaeology, and about all the Ameri-

can, Native American, and Mexican archaeologists who diligently practice these crafts with their many partners and patrons. . . .

Our daily newsletter runs a footer that proclaims:

> SWA's daily newsletter deals with quotidian issues of anthropology and archaeology—cultural survival, time and space, material culture, social organization, and commerce, to name just a few. Our electronic potlatch and digital totemic increase rites focus and multiply historic preservation activities in the Greater Southwest . . . SWA [is a] . . . customer-centric corporation dedicated to the ethnographic study of the scientific practices of the American Southwest and the Mexican Northwest. Our goal is to create and promote diverse micro-environments and open systems in which archaeologists can develop their talents and take the risks from which innovation and productivity arise. . . .

For all our faults with new media publishing, we think it is important to grind something out every day. Some have complimented us on our persistence with the web since February of 1995. We, however, tend to think that we are rather like the proverbial goldfish in a five-gallon goldfish bowl. Archaeology takes up much of our mental capacity, and we have remaining (in the frontal cortex of our goldfish brain) slots for only seven or eight bits of flash memory. We swim across the goldfish bowl and dump that tiny bit of data, exhausted. But, when we turn around and take a look, there is a new and completely unexplored ocean sitting before us. So, off we go again... 📧

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rates to gauge faculty success. Working in an area where little research is published means that your work has fewer chances of being cited.   ▣

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NEWS & NOTES

Short-Term Fellowships and Travel Grants for the Digital Archaeological Archive of Chesapeake Slavery. The Thomas Jefferson Foundation, which owns and operates Thomas Jefferson's historic home at Monticello, is pleased to announce a program of short-term residential fellowships and travel grants at its International Center for Jefferson Studies. Several of these fellowships are reserved for archaeologists whose work focuses on issues of slavery in the greater Chesapeake region and whose work would benefit from the use of the Digital Archaeological Archive of Chesapeake Slavery (http://www.daacs.org). Short-Term Fellowships are awarded for periods of up to four months to doctoral candidates and postdoctoral scholars from any country. Awards carry a stipend of $1,500 for United States and Canadian fellows plus pre-approved roundtrip airfare, and $2,000 for overseas fellows plus airfare. Residential accommodation may be available on a limited basis. Fellows are expected to be in residence at the Center during the course of the fellowship, and no awards are made for work carried on elsewhere. Applicants should submit four copies of (1) a succinct description of the research project, including how Archive data will be used (500-words), and (2) a curriculum vita. In addition, please arrange for three references to be sent directly to the Center at the address below. Deadlines for Applications: April 1 and November 1. Candidates who submit applications by April 1 will normally be considered for awards between July and January, and candidates who apply by November 1 for awards between February and July. Applications and references should be addressed to the Fellowship Committee, International Center for Jefferson Stud-

ies, Monticello, Post Office Box 316, Charlottesville, VA 22902, Attention: Jillian Galle. For application questions, contact Jillian Galle, Project Manager, The Digital Archaeological Archive of Chesapeake Slavery; tel: (434) 984-9873. The fellowship and grants program is underwritten by endowments established for this purpose by the Batten Foundation and First Union National Bank of Virginia, and by a generous grant from the Coca-Cola Foundation.

National Geographic Expeditions Council Grants. The National Geographic Expeditions Council is a grant program dedicated to funding the exploration of largely unrecorded or little-known areas of the Earth as well as regions undergoing significant environmental or cultural change. Established in 1998, the National Geographic Expeditions Council funds projects that span the entire spectrum of exploration and adventure. The program is editorially driven and projects must have the potential for a compelling written and visual record. Several New Explorers grants are also awarded each year, which are smaller and not necessarily awarded for story potential, but are given more specifically to talented and emerging explorers who offer future potential. Awards generally range from $5,000 to $35,000 and are to be used for direct field costs. The Council requires a project proposal for screening at least 6–8 months in advance of projected field dates. These proposals should be 3–5 pages in length and should detail the expedition's purpose, proposed itinerary and budget, team members and relevant experience, additional funding sources, and story potential. After evaluation, proposals meeting initial requirements will be issued applications for formal review and decision by

Council members. International applicants are encouraged; however, all submissions must be made in English to receive timely consideration by the Council. National Geographic requires that grant recipients give right of first refusal to all publication and broadcast media of National Geographic and its subsidiaries. For further information regarding the program or its application process, contact the Council at tel: (202) 862-5200, email: ecouncil@ngs.org, or web: http://www.nationalgeographic.com/council/.

The University of Arizona's Archaeological Field School Sponsored by NSF's Research Experiences for Undergraduates Program. In cooperation with the White Mountain Apache Tribe, the Department of Anthropology offers a special field program in Southwest Archaeology and Historic Preservation. Ten undergraduate students will be sponsored by the National Science Foundation's Research Experiences for Undergraduates Program and receive stipends of $1,800 and a waiver of tuition and fees. An additional five students who have received their B.A. by May 2003 are eligible for graduate credit. Students will participate in an intensive program of archaeological survey, mapping, excavation, damage assessment, ruins preservation and stabilization, and laboratory analyses, while participating in a unique collaborative program between the Field School and the White Mountain Apache Tribe. Field work is complemented by evening lectures that focus on topics in archaeological method and theory, Southwest archaeology, ethics, and careers. A central theme of the Field School will be to teach students how archaeologists and tribes can work cooperatively to achieve

mutual research and heritage preservation goals. The Field School runs from June 1st to July 13th with students earning 6 credit units at either the undergraduate or graduate level. The deadline for applications is March 14. Applications and information are available on our web page: http://w3.arizona.edu/~anthro/FieldSchool/, or contact Dr. Barbara J. Mills, Director, at bmills@u.arizona.edu

National Park Service's 2003 Archaeological Prospection Workshop. The National Park Service's 2003 workshop on archaeological prospection techniques entitled "Current Archeological Prospection Advances for Non-Destructive Investigations in the 21st Century" will be held May 19–23, 2003, at the Cahokia Mounds State Historic Site in Collinsville, Illinois. This will be the thirteenth year of the workshop dedicated to the use of geophysical, aerial photography, and other remote sensing methods as they apply to the identification, evaluation, conservation, and protection of archaeological resources across this Nation. The workshop this year will focus on data processing and interpretation in addition to the more basic topics involving the theory of operation, methodology, and use of the equipment in the field. There is a tuition charge of $475.00. For further information and registration forms, contact Steven L. DeVore, Archeologist, National Park Service, Midwest Archeological Center, Federal Building, Room 474, 100 Centennial Mall North, Lincoln, Nebraska 68508-3873; tel: (402) 437-5392, ext. 141; fax: (402) 437-5098; email: steve_de_vore@nps.gov; web: http://www.cr.nps.gov/mwac/.

New Graduate Program in Pre-Columbian Art History. The Department of Visual Arts at the University of California-San Diego will be accepting applications for a new combined M.A. and Ph.D. program in Art History for the fall of 2003. The program, which offers specializations in Pre-Columbian and Native American art his-

tory, encourages interdisciplinary study in such areas of the humanities and social sciences as archaeology, ethnohistory, linguistics, and Native American Studies. Information about the program and application procedures is available at http://visarts.ucsd.edu/grad/phdAppGuidehtm. Application deadline: Feb. 1.

Announcing Grant Programs in Faunal Analysis and Paleoindian Archaeology. The George C. Frison Institute of Archaeology and Anthropology announces the fifth year of competition in two grant programs: faunal analysis and Paleoindian archaeology. The grants support pilot and project completion studies of Paleoindian and faunal collections of the University of Wyoming. The Frison Institute is dedicated to research into Paleoindian archaeology and the peopling of the western hemisphere, especially as Wyoming data bear on these topics. Each grant pays up to $500 directly to the PI. Submission deadline is February 14, 2003. For more information and an application contact: Director, George C. Frison Institute of Archaeology and Anthropology, University of Wyoming, P.O. Box 3431, Laramie, WY 82071; email: PAYNE@UWYO.EDU; web: http://uwadmnweb.uwyo.edu/anth/FRISON/Frison.html. The 2002 recipients of Frison Institute grants were Kenneth P. Cannon, Lincoln, NE and David Kilby, Albuquerque, NM.

Announcing Grant Program in the Sainsbury Research Unit for the Arts of Africa, Oceania, and the Americas. Full and part grants are offered for the 2003/04 M.A. course in "Advanced Studies in the Arts of Africa, Oceania and the Americas" and for research leading to a Ph.D. The 3-year Robert Sainsbury Scholarship is available from September 2003 to fund Ph.D. research tenable at the Sainsbury Research Unit. The M.A. course combines anthropological, art-historical, and archaeological approaches, and is intended for students who wish to pursue research and academic/museum-related

careers. Facilities in the Sainsbury Centre for Visual Arts include a major research library and personal study space with PCs. Applicants should have, or be about to have, a good undergraduate degree in anthropology, art history, archaeology, or a related subject. For further details and application information, contact the Admissions Secretary, Sainsbury Research Unit, Sainsbury Centre for Visual Arts, University of East Anglia, Norwich NR4 7TJ, UK; tel: (01603) 592498; fax: (01603) 259401; email: admin.sru@uea.ac.uk. Application deadline is March 15, 2003.

New National Register Listings. The following archaeological properties were listed in the National Register of Historic Places during the third quarter of 2002. For a full list of National Register listings every week, check "Recent Listings" at http://www.cr.nps.gov/nr/nrlist.htm.

- Arkansas, Garland County. *The Homer (Shipwreck)*. Listed 9/14/02.
- Florida, Leon County. *Killearn Plantation Archeological and Historic District*. Listed 8/16/02.
- Florida, Martin County. *Mount Elizabeth Archeological Site*. Listed 9/14/02.
- Florida, Palm Beach County. *Hurricane of 1928 African American Mass Burial Site*. Listed 9/12/02.
- Illinois, Jackson County. *Giant City Stone Fort Site*. Listed 8/9/02.
- Kentucky, Boone County. *Big Bone Lick Archeological District*. Listed 8/22/02.
- Pennsylvania, Franklin County. *Jeremiah Burns Farm*. Listed 8/15/02.

New Book Series on Cultural Heritage Studies. The University Press of Florida is proud to announce the creation of a new series devoted to the study of Cultural Heritage Studies. This thematic series brings together research devoted to understanding the material and behavioral characteristics of heritage. The series explores

the uses of heritage and the meaning of its cultural forms as a way to interpret the present and the past. The goal of the series is to highlight important scholarship related to America's diverse heritage. Books include important theoretical contributions and descriptions of significant cultural resources. This scholarship addresses questions related to culture and describes how local and national communities develop and value the past. The series includes works in public archaeology, heritage tourism, museum studies, vernacular architecture, history, and material culture studies. Authors interested in contributing to the Cultural Heritage Studies series should send inquiries to: Paul A. Shackel, Series Editor, Department of Anthropology, University of Maryland, College Park, MD 20742; tel: (301) 405-1422; email: pshackel@anth.umd.edu.

The Field Museum Announces Save America's Treasures Grant. The Department of Anthropology at The Field Museum has been awarded a $400,000 grant from the prestigious Save America's Treasures program to help conserve the North American Ethnographic and Archaeological Collection. This collection, with its associated archives and documentary photographs, constitute one of the world's great resources for studying the intellectual and cultural heritage and diversity of the United States. Consisting of nearly 1,000,000 objects gathered since 1890, this outstanding collection preserves the artistic, ceremonial, and utilitarian legacies of dozens of prehistoric and historic Native American cultures. Funded by of the National Endowment for the Arts and the National Park Service, this Save America's Treasures grant will be used to hire two collections managers, two conservators, and one half-time information analyst for the two-year duration of the project. The project team will work with existing Department of Anthropology staff and faculty to: 1) conduct a systematic survey of pesticide contamination; 2) implement a pest management program;

3) mitigate chemical threats to the objects; 4) ameliorate physical threats to the objects; and 5) produce finding aids to the supporting documentation that provide the intellectual and cultural context for the priceless collection. Inquiries should be directed to Steve Nash, Head of Collections (email: snash@fieldmuseum.org) or Ruth Norton, Chief Conservator (email: rnorton@fieldmuseum.org). If interested in conducting research on the collection, please contact Jonathan Haas, MacArthur Curator of North American Anthropology (email: haas@fieldmuseum.org).

New Book Series on the Archaeology of the North American Southwest. AltaMira Press is pleased to announce the new Southwest Archaeology Series, which will feature several volumes that critically evaluate current archaeological research in the U.S. Southwest and Northwest Mexico. The books consider topics that are pervasive themes both in the archaeology of the region but also in contemporary anthropological inquiry, such as ethnicity, gender, migration, and violence. The volumes will discuss more than just what archaeologists know about the prehistory of the Southwest; they also consider issues that impact the practice of archaeology today, including the roles of cultural resource management, oral history, and cultural property rights. Each contribution to the series is guided by the research interests and theoretical perspective of the author, but each book is ultimately synthetic, comparative, and fully engaged in broader anthropological interests. Scholars interested in contributing to the series should contact John Kantner, Department of Anthropology and Geography, Georgia State University, 33 Gilmer St., Atlanta, GA 30303; tel: (404) 651-1761; email: kantner@gsu.edu.

paths toward the successful and efficient development of quality images of visual impact. By reducing the file size of important visuals, the materials remain useful and effective while improving the quality and functionality of websites delivering archaeological content.

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Element K Journals
  2000   Tips to Make Your Page Load Faster. *Inside Web Design* 1(6). Rochester, New York.

Kuckelman, Kristin A. (editor)
  2000   *The Archaeology of Castle Rock Pueblo: A Thirteenth-Century Village in Southwestern Colorado.* Electronic document, http://www.crowcanyon.org/researchreports/castlerock/start.htm. Date of use: 22 October 2002.

Weinman, L.
  1999   *Designing Web Graphics (3rd).* New Riders Publications, Indianapolis.

POSITIONS OPEN

Position: Assistant Professor
Location: San Diego

University of California, San Diego, Department of Anthropology (http://www.anthro.ucsd.edu) invites applications for a tenure-track Assistant Professorship starting July 1, 2003. Ph.D. must be completed by September 1, 2003. We seek an anthropological archaeologist. Present archaeological faculty cover Early States in the Near East and the Andes. Accordingly, preference will be given to candidates that complement these strengths by adding either temporal depth (e.g., Early Sedentism/Agriculture in the Near East or the Andes) or areal diversity (e.g., Early Civilizations in Mesoamerica, Egypt, China, etc.). Applicants should have a strong record of archaeological research and an active field project. Additionally, candidates must demonstrate excellence, or promise of excellence, in teaching and ability to obtain research grants. Salary will be commensurate with qualifications, and based on UC pay scales. To assure consideration, send cover letter of interest that describes research and teaching interests, vita, and name/address of three referees by February 10, 2003 to: Archaeological Search Committee, Department of Anthropology-0532, UCSD, 9500 Gilman Drive, La Jolla, CA 92093-0532. UCSD is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of excellence and diversity among its faculty and staff. This employer does offer employment benefits to domestic partners of employees. This employer does prohibit discrimination on the basis of sexual orientation/preference and gender identity/expression.

Position: Classical Archaeologist
Location: Boston, MA

The Department of Archaeology at Boston University seeks an archaeologist of the Greek and Roman worlds at the Assistant Professor level. The ideal candidate will have experience in multidisciplinary field research and commitment to excellence in teaching. Ph.D. is required; tenure-track appointment effective September 1, 2003. Applications will be accepted and reviewed until the position is filled. The search committee will conduct interviews at the annual meeting of the Archaeological Institute of America in January 2003. Applications and three letters of recommendation should be addressed to Professor James Wiseman, Boston University, Department of Archaeology, 675 Commonwealth Avenue, Boston, MA 02215. AA/EOE

Position: Assistant Professor
Location: Missoula, MT

The University of Montana, Department of Anthropology invites applications for a full-time tenure track faculty position at the Assistant Professor level, beginning August 2003. The successful applicant will have a specialization in Historical Archaeology and the ability to teach a four-field Introduction to Anthropology course. A Ph.D. in Anthropology is required and a background in western North America and Architectural History is desirable. Applicants should submit a letter of interest, vita, and the names of three references. The deadline for applications is February 1, 2003. Please send applications to Thomas A. Foor, Chair, Search Committee, Department of Anthropology, The University of Montana, Missoula, Montana 59812. AA/EOE Employer.

CALENDAR

2003–2004

2003

FEBRUARY 21–22

The 45th Annual Caddo Conference will be held at Henderson State University, Arkadelphia, Arkansas. Papers are invited on the archaeology, history, and culture of the Caddo Indians and the Caddo area in Arkansas, Louisiana, Texas, and Oklahoma. The 2003 theme is "Louisiana Purchase: Antecedents and Consequences." For additional information, contact Dr. Mary Beth Trubitt, Arkansas Archeological Survey, tel: (870) 230-5510; email: trubitm@hsu.edu.

FEBRUARY 22–23

The 31st Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory will be hosted this year by The University of Illinois at Chicago and The Field Museum. The meetings will be held at The Field Museum, Chicago, Ill. For more information, visit http://www.uic.edu/depts/anth/andes/andesprog.html.

MARCH 8

Symposium on Ohio Valley Urban and Historic Archaeology will be held at the Days Inn, Chillicothe, Ohio. For more

information, contact Program Chair: Kit Wesler, Department of Geosciences, 104 Wilson Hall, Murray State University, Murray, KY 42071-3331; tel: (270) 762-3457; email: kit.wesler@murraystate.edu. Arrangements chair: Al Tonetti, ASC Group Inc., 4620 Indianola Ave., Columbus OH 43214; tel: (614)268-2514; fax: (614)268-7881; email atonetti@ascgroup.net.

MARCH 15

The 26th Annual Meeting of the Midwest Conference on Mesoamerican Archaeology and Ethnohistory will be held at University of Michigan, Ann Arbor. For further details, contact Jeffrey R. Parsons, Museum of Anthropology, University of Michigan, Ann Arbor, MI 48109; email: jpar@umich.edu.

MARCH 19–23

The 3e Festival du Film Archéologique de Nyon held in Nyon, Switzerland and presented under the auspices of the Musée Romain de Nyon is a biennial event featuring recent productions. Programming is framed by introductory talks and question-and-answer sessions led by area specialists. Screenings will be held at l'Usine à Gaz, 1 Rue Cesar Soulie. For more information, contact Christophe Goumand, Director. Musée Romain de Nyon, Rue Maupertuis, 1260 Nyon, Switzerland; tel: +41 (022) 363.82.82; fax: +41 (022) 363.82.86; email: musee.romain@nyon.ch; web: http://www.mrn.ch/.

APRIL 1–5

The 10th International Meeting of the Wetlands Archaeology Research Project (WARP), University of Exeter, England, will be held in Olympia, Washington. The theme and conference title is "West Sites Connections—Linking Indigenous Histories, Archaeology, and the Public." Conference activities include conservation of ancient wood and fiber

workshops and presentations of the latest and ongoing wet sites research around the world. For more information, please visit http://www.spscc.ctc.edu/warpconference.

APRIL 2–5

The 7e Festival du Film d'Archéologie d'Amiens is a biennial festival of recent films on archaeology. For more information, contact Tahar Ben Redjeb, Director. Centre Interdisciplinaire de Recherches Archéologiques de la Somme (CIRAS), 5 rue Henri Daussy, 80044 Amiens, France; tel: +33 (03) 22.97.33.44; fax: +33 (03) 22.97.33.56; email: ciras@wanadoo.fr.

APRIL 4–5

The Society for Economic Anthropology meets in Monterrey, Mexico, on the theme of "Migration and Economy." For more information, contact Lillian Trager, Dept of Sociology and Anthropology, University of Wisconsin-Parkside, Kenosha, WI 53141; email: trager@uwp.edu.

APRIL 9–13

The 68th Annual Meeting of the Society for American Archaeology will be held in Milwaukee, Wisconsin.

APRIL 23–26

The 2003 Annual Meeting of the American Association of Physical Anthropologists will be held in Tempe, Arizona. For additional information, visit http://www.physanth.org or contact John Relethford, Department of Anthropology, SUNY College at Oneonta, Oneonta, NY 13820; tel: (607) 436-2017; fax: (607) 436-2653; email: relethjh@oneonta.edu. For local arrangements information, contact Leanne Nash, Department of Anthropology, Box 872402, Arizona State University, Tempe, AZ 85287-2402; tel:

(480) 965-4812; fax: (480) 965-7671; email: leanne.nash@asu.edu.

MAY 7–11

The Rocky Mountain Section Meeting of the Geological Society of America will include sessions and a field trip sponsored by the Archaeological Geology Division. Included are a symposium on "Relationships of Physical Systems to Archaeological Records and Prehistoric Cultures in the Four Corners Area" and a theme session on "Regional Topics in Archaeogeology." The abstract deadline is January 30, 2003. General meeting information and instructions for submitting abstracts are available at http://www.geosociety.org.

JUNE 21–26

The Fifth World Archaeological Congress will be held at The Catholic University of America, centrally located in northeast Washington, D.C. Themes include policy issues concerning corrections and future directions in the practice of global archaeology; practical knowledge to increase self-reliance and responsibility in protecting sites, artifacts and intellectual property; theoretical frontiers and research results with relevance across tribal and national boundaries. For information, contact WAC-5 Organizing Committee, Department of Anthropology, American University, Washington, DC 20016, email: wac5@american.edu, fax: (202) 885-1381, web: http://www.american.edu/wac5.

JULY 23–31

The XVIth INQUA Congress will be held at the Reno Hilton Resort & Conference Center Reno, Nevada. Full details can be found on the Congress website at http://www.dri.edu/DEES/INQUA2003/inqua_home.htm.

SEPTEMBER 25–27

Exploring Malta's Prehistoric Temple Culture will be held at the DePorres Cultural Center in Sliema, Malta. The purpose is to encourage a broad examination of the megalithic monuments and related artifacts of Malta and Gozo. The conference will provide a meeting place for professionals from a variety of disciplines to focus on a common interest: identifying and understanding the Neolithic "Temple Culture" of the Maltese Islands. For more information, contact the conference organizers at The OTS Foundation, P.O. Box 17166, Sarasota, FL 34276; tel: (941) 918-9215; fax: (941) 918-0265; email: EMPTC@aol.com; web: http://www.otsf.org/EMPTC-conference.html.

OCTOBER 16–19

The Midwest Archaeological Conference will be held at the Hyatt Regency Hotel in Milwaukee, Wisconsin. For more information, contact Robert J. Jeske (email:jeske@uwm.edu) or John D. Richards (email:jdr@uwm.edu).

NOVEMBER 12–16

The 36th Annual Chacmool Conference will be held at the University of Calgary, Calgary, Canada. The conference topic is "Flowing Through Time: Explore Archaeology Through Humans and their Aquatic Environment" and will deal with all aspects of how humans used water in the past, lived in wetland environments, moved on water, excavate under water, etc. A money award is made for the best paper presented by a undergraduate or M.A. student. For more information or for submitting session and paper topics, contact chacmool@ucalgary.ca.

NOVEMBER 19–23

The 102nd Annual Meeting of the American Anthropological Association will be held at the Chicago Hilton and Towers, Chicago, IL. For more information, visit http:/www.aaanet.org/mtgs/mtgs.htm.

2004

JUNE

The Third International Conference of the Center for Civilizational and Regional Studies of the Russian Academy of Sciences will be held in Moscow on the topic "Hierarchy and Power in the History of Civilizations." The Organizing Committee will consider panel proposals received by February 1, 2003. Proposals emphasizing theoretical and cross-regional approaches to "hierarchy and power" are strongly encouraged. For more information, contact Prof. Dmitri M. Bondarenko, Dr. Igor L. Alexeev, and Mr. Oleg Kavykin, preferably by email (civ-reg@inafr.ru) or fax + (7 095) 202 0786. Postal mail can be sent to the Center for Civilizational and Regional Studies, Russian Academy of Sciences, 30/1 Spiridonovka St., 123001 Moscow, Russia; tel: + (7 095) 291 4119.

Over 60 Years of *American Antiquity* Are Now Available in JSTOR!

The Society for American Archaeology is pleased to announce the full-text, on-line version of *American Antiquity* 1935–1997. To find out whether your library is a JSTOR participant, please email jstor-info@umich.edu. If you are not at a participating institution, as a current member you can now access the *American Antiquity* archive for just $25 per calendar year.

To be able to search over 60 years of *American Antiquity* in full-text format, **print out** this form and **fax** +1 (202) 789-0284 or **mail** the following information with payment to:

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 For additional information on JSTOR, please visit www.jstor.org.

VOLUNTEERS: SAA NEEDS YOU NEXT APRIL

Would you like the opportunity to meet people interested in archaeology, have fun, and save money? Then apply to be an SAA volunteer! Volunteers are crucial to all on-site meeting services, and we are currently looking for people to assist the SAA staff at the 68th Annual Meeting in Milwaukee, Wisconsin, on April 9–13, 2003. In return for just 12 hours of your time, you will receive complimentary meeting registration, a free copy of the Abstracts of the 68th Annual Meeting, and a $5 stipend per shift. For details and a volunteer application, please go to SAAweb (http://www.saa.org) or contact Melissa Byroade at SAA (900 Second St. NE #12, Washington, DC, 20002-3557; tel: [202] 789-8200; fax: [202] 789-0284; email: melissa_byroade@saa.org). Applications are accepted on a first-come, first-serve basis through March 4, so contact us soon to take advantage of this great opportunity. See you in Milwaukee!

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