

Ashes2Art Now and Tomorrow: Delphi, Alexandria and the Red Sea

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Resumen

Ashes2Art es una iniciativa cooperativa de investigación de estudiantes universitarios que se centró en la aplicación de herramientas digitales a proyectos culturales de Patrimonio Cultural. El programa comenzó en 2005 en Coastal Carolina University, y de 2007 a 2009, la Universidad trabajó con estudiantes de Arkansas State University para estudiar y construir varios recursos digitales que pertenecen a Delfos, Grecia. En enero 2011 el proyecto Ashes2Art en Coastal Carolina University comienza la colaboración con el Centro para la Arqueología Marítima y Herencia Submarina y Cultural de la Universidad de Alejandría, Egipto. Trabajaremos con directores de excavación en el Lago Mareotis (cerca de Alejandría) y en varios sitios del Mar Rojo.

Palabras clave: MODELOS DIGITALES, HUMANIDADES DIGITALES, PEDAGOGÍA

Abstract

Ashes2Art is a collaborative undergraduate research initiative focused on the application of digital tools to cultural heritage projects. The program started in 2005 at Coastal Carolina University, and from 2007 to 2009, Coastal Carolina University worked with students and faculty at Arkansas State University to study and build various digital resources pertaining to Delphi, Greece. In January 2011 the Ashes2Art project at Coastal Carolina University begins collaboration with the Center for Maritime Archaeology and Underwater Cultural Heritage at Alexandria University, Egypt. We will work with excavation directors on Lake Mareotis (near Alexandria) and at various sites along the Red Sea.

Key words: DIGITAL MODELS, DIGITAL HUMANITIES, PEDAGOGY

1. INTRODUCTION

Students are digital natives. Cellphones, GPS, iPods, CAD designs, email, digital projection systems, home computers, the internet...all are commonplace. Digital models, too, have become common to a wide range of programs and projects, including mass media productions (feature films and television), museum displays, ipod apps, and various cultural heritage initiatives. There persists an underlying suspicion about digital models since there exists no coherent international body to assess and jury the accuracy of digital models and related materials. The SAVE project (Serving and Archiving Virtual Environments), discussed at length at the annual Computer Applications and Quantitative Methods conference (CAA) in Budapest in 2008, proposed just such a governing body. Although the Ashes2Art project is directly interested in the construction of accurate, publicly available digital models, this is a topic for future conversations. The present discussion provides a brief overview of a pioneering undergraduate program that combines digital technologies with various disciplines in the humanities to explore cultural heritage sites. It trains the next generation of digerati to apply their skills to important heritage issues.

2. ASHES2ART

Ashes2Art (www.coastal.edu/ashes2art) began at Coastal Carolina University in 2005 as a means of blurring the lines between lecture and laboratory, between art history, archaeology and technology, and between undergraduate students and faculty research. It is an undergraduate interdisciplinary and collaborative program that combines art history, archaeology, web design, 3D computer models, video design and digital panoramic photography to explore and recreate monuments of the ancient past online. As a digital humanities initiative concerned with cultural heritage, it focuses on a web-based, open-source presentation of its materials conducted by faculty and undergraduate students at Coastal Carolina University and other universities, including Arkansas State University in Jonesboro, AR and, most recently, Alexandria University, Egypt. Because it relies exclusively on undergraduates, a program of this kind has distinct limitations which may not affect other programs to the same extent. Budgets are a concern to programs everywhere, especially in our current economy, but our financial concerns are unique, or at least more immediate. The turnover of our workers (ie. students) is more pronounced than one would find in graduate programs, governmental agencies or in the private sector. We also are at the mercy of our student skill sets: in any given year we may have several who can build digital models, but none that with extensive web design skills, or vice versa. As program directors, our schedules are limited by the other courses we teach, by sundry university commitments, by travel/funding restrictions. Our ability to integrate new

technologies and to teach those technologies is restricted by state purchasing regulations, by staffing issues, by the skills and interest levels of our students, and by curricular concerns that do not affect other programs.

My co-director, Paul Olsen, and I founded the project with an idea and a graphic design Macintosh computer lab with no additional funding. As an art historian, I was impressed by the work at the University of California-Los Angeles (UCLA) and various programs worldwide, and I wondered if similar ideas and technologies might be applicable to an undergraduate course setting. Our first stage was exploratory: we focused on applying various technologies to three well-known *piacze* in Renaissance Florence. It was a test case to gauge the potential of our ideas. We did not attempt to reconstruct “lost” monuments, but our students stitched digital panoramas, wrote essays, compiled biographies and bibliographies, designed a website, and built an interactive 3D map. All this with twelve students in one semester. A summer institute at UCLA sponsored by the National Endowment for the Humanities in 2006 (directed by Drs. Sander Goldberg and Diane Favro) allowed me to discuss our preliminary work with a discriminating audience. The results of that first semester (fall 2005) and subsequent conversations with institute directors and attendees were sufficiently encouraging that we decided to expand the project’s scope.

2.1 Ashes2Art: Delphi

In fall 2006 we began collaboration with Dr. Alyson Gill at Arkansas State University (also an attendee at the NEH Institute at UCLA) to work on Delphi, Greece, and we planned to include the construction of digital models as a focus of the program.



Figure 1. Reconstruction of the southeast corner of the Temple of Apollo, Delphi. Taylor Baldwin, Coastal Carolina University, 2010.

Ashes2Art was offered for course credit at both universities in spring 2007, 2008 and 2009. We were awarded a grant from the National Endowment for the Humanities in 2007 and, with permissions from the Hellenic Ministry of Culture and the support of the American School for Classical Studies at Athens, we traveled to Delphi with students in summer 2007 and 2008. We also received permission to work at Corinth, Nemea, Isthmia, Epidauros, Olympia, Delos, and Aegina. Over the course of those two years, students collected GPS data, shot digital panoramas, built digital models of various monuments, designed a new web site, wrote essays, wrote lesson plans in compliance with United States National Standards for Visual Arts Education, built flythrough and educational videos, and designed interactive maps and resources. We hope to post the

40-plus panoramas online, but we are still waiting for permission from the Hellenic Ministry of Culture and the Archaeological Museum at Delphi. In support of the project, the administrations at Coastal Carolina and Arkansas State built project-specific computer modeling labs totaling over \$150K. At Coastal Carolina, the Ashes2Art course is now crosslisted between Art History, Graphic Design and History, which means students from various disciplines can receive credit toward their major and minor degrees. It also means that we are able to tap into the skills and methods of disparate programs of study.

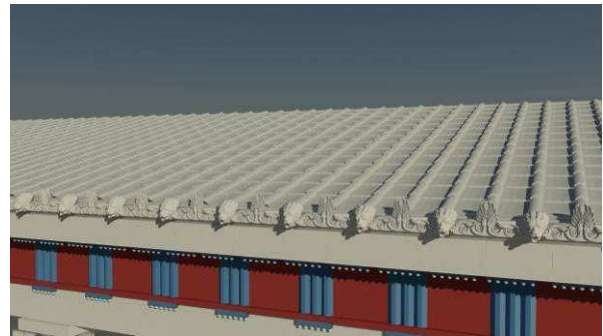


Figure 2. Reconstruction of the entablature, roof, lion heads and acroteria on south side of Temple of Apollo, Delphi. Taylor Baldwin, Coastal Carolina University, 2010.

3. DIGITAL MODELS

I have published elsewhere some general remarks about the methodology employed in the construction of our digital models (FLATEN, 2009). Digital models are increasingly common among digital humanities, cultural heritage, and virtual archaeology projects so I will not endeavor to summarize those thoughts here, but there are considerations that pertain to utilizing (and teaching) these kinds of tools in an environment that is exclusively aimed at undergraduates. Our models are focused on 4th century BCE monuments at Delphi, the famous site of the Delphic oracle and of the Pythian games. The models are based primarily on the *Fouilles de Delphes*, the excavation reports published by the French Archaeological School over the last hundred years. In conjunction with those reports, we use high-resolution photographs of the site and of objects in the Archaeological Museum, and monument-specific articles that revise, refine or supplement the information in the archaeological reports. The marble textures we apply to our models are taken directly from high-res photographs of the marble blocks onsite. In some cases, we are forced to build multiple models to address competing scholarly opinions and concerns, as is the case with the roof of the tholos of Athena Pronaia (single tier versus double tier). Models are built in 3dsMax and Mudbox, with early draft models sometimes sketched out in Google Sketch Up Pro. Beginning in fall 2009, a course in 3dsMax is offered through the Department of Theatre at Coastal Carolina University to train students in the basics of digital modeling before entering the Ashes2Art program. Surprisingly perhaps, the demands of digital set design for large-scale theatre productions provide many of the skills our students need for our reconstructions of ancient monuments. Digital models are only one component of the Ashes2Art program, but they are vital to our mission.

Our philosophy on computer reconstructions and the project in general can be summarized by three points: 1) Uncertainty is a crucial component of knowledge; 2) Precision does not imply accuracy; and 3) Questions are more important than definite answers. These concepts are crucial to our students and to the success of the program, from both a pedagogical standpoint and when surveying our output. Many of the specifics of any given monument that we work on are not



Figure 3. Reconstruction of entrance (east) to the Temple of Apollo, Delphi. Taylor Baldwin, Coastal Carolina University, 2010.

known, or at the very least are contested; this is not surprising considering that the structures are 2500 years old. The difficulty that derives from this fact is especially evident in trying to reconstruct the interior of the Temple of Apollo (which we are still working on). To my knowledge there exists no generally accepted model in any format of the Temple of Apollo's interior. Uncertainty in digital reconstruction models (or any type of models) is not only valuable and expected, it is necessary; the key is to make certain that the (meta)data that supports the models is clearly presented and the methods are transparent. Computers allow an almost infinite degree of precision, but designing a model that can be measured in fractions of millimeters does not necessarily have any bearing on the accuracy of that reconstruction: the height and intercolumniation of a Doric column is rendered irrelevant if that column should be Ionic, and so on. Ultimately, the types of questions that are raised by uncertainty become invaluable for the collaborative learning and teaching process: what types of hinges were used? How were treasury or temple doors locked? Was the roof tiles built of ceramic or marble? These "rules" or guiding principles have helped us to define our mission and refine our models, essays, lesson plans and resource materials, and they are valuable lessons for our students regardless of discipline. They encourage research, enhance discovery, support creative solutions. Our methods and our successes have allowed Ashes2Art, along with programs at Duke and Harvard universities, to be identified recently as "inspiring a new kind of undergraduate education that is immersive, experiential, and contributive at the same time." (VILLANO, 2009: 26-30)

4. ASHES2ART AND ALEXANDRIA UNIVERSITY

In 2010 the details were sketched out for a collaboration between the Ashes2Art program at Coastal Carolina University

and the Center for Maritime Archaeology and Underwater Cultural Heritage (CMA) at Alexandria University, Egypt. Olsen and Flaten visited Alexandria in March 2010 to discuss our program with students and discuss the details of the collaboration with Dr. Emad Khalil (director, CMA) and other faculty and staff at the University. A signed Memorandum of Understanding is expected in August 2010. Beginning in January 2011, Ashes2Art will work at various excavation sites at Lake Mareotis, immediately west of modern Alexandria (BLUE, 2006, 2007; KHALIL, 2010). When work at Mareotis is sufficiently underway, we plan to work on multiple sites on the Red Sea, perhaps including Wadi Gawasis, Quseir al-Qadim, and the Sadana Island shipwreck. In support of excavation teams led by Dr. Emad Khalil, Dr. Lucy Blue (University of Southampton, UK), and Dr. Cheryl Ward (Coastal Carolina University), Ashes2Art will collect GPS data, shoot digital panoramas, design and populate site-specific online databases and

site-specific virtual museums, build computer models of excavated ancient boats and ports, and design a digital representations of the radical topographic changes to the areas over the past two thousand years. As part of those reconstruction efforts, we plan to introduce LIDAR scanning to the sites to better understand, and better reconstruct, the topography.

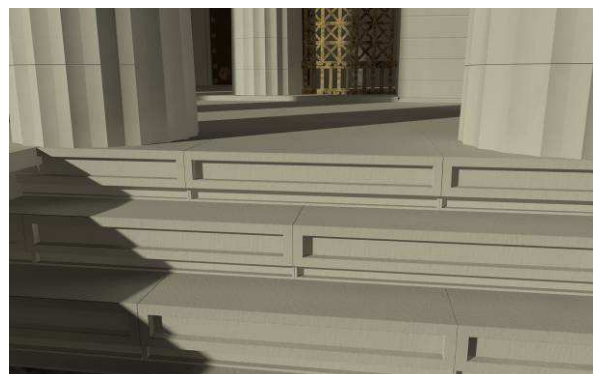


Figure 4. Detail of reconstructed stereobate and stylobate from the east, Temple of Apollo, Delphi. Taylor Baldwin, Coastal Carolina University, 2010.

This collaboration represents a radical and exciting departure for the Ashes2Art program. For the first time, we will have unlimited access to all excavation materials, we will be able to document excavations in realtime, and we will assist in the reconstruction of sites and maritime vessels that heretofore were completely unknown. We will be able to work directly with excavators and play a fundamental role in disseminating data about their excavations worldwide. Moreover, our digital models of individual components of boats will aid in the physical reconstruction of the vessels themselves and to better understand the specifics of boat construction and trade from ancient Egypt through Rome and the Ottomans. The collaboration also is expected to result in faculty and student exchanges between the two universities beginning in spring 2011. Dr. Cheryl Ward and I will take students to Egypt for three weeks in May 2011 to begin that process. Program directors at both institutions will apply for collaborative grants through national agencies in Egypt and in the United States.

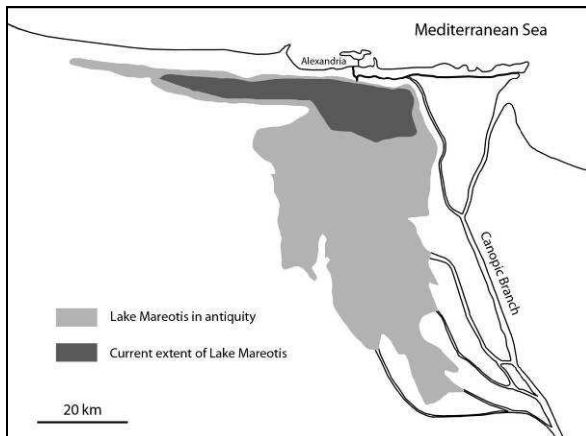


Figure 5. Map of Lake Mareotis today and in antiquity (Khalil).

5. CONCLUSIONS

In 2007 I addressed the historic joint-meeting of the National Endowment for the Humanities (NEH) and Consiglio Nazionale delle Ricerche (CNR) in Washington, D. C. about the Ashes2Art project. (FLATEN, 2008: 76-86) At the time I expressed that my presence there was similar to arriving at a car race riding a bicycle. With the august body of scholars and researchers gathered at Arqueologica 2.0, I feel in some ways as I did then. Ashes2Art is a small and modest project, with a negligible budget and a “staff” of undergraduates that changes from semester to semester. Yet, our project is vital to the future of cultural heritage programs and digital humanities initiatives because we are training the next generation of programmers and researchers. Students are introduced to a heuristic means of acquiring knowledge, they are discovering new approaches to learning, and they are applying the digital skills that pervade our modern world to sensitive heritage issues. I am proud of our students’ successes, and I am excited about the opportunities that our new collaboration with Alexandria University will provide. I look forward to discussing future developments of our program at forthcoming SEAV conferences, and to participate in the International Forum for Virtual Archaeology.

ACKNOWLEDGMENTS

I would like to express my sincerest thanks to SEAV and Arqueológica 2.0 for inviting me to participate in this exciting event. Paul Olsen, Ashes2Art co-founder and co-director, and I are indebted to the administration at Coastal Carolina University for their continued support of the Ashes2Art project, in particular the Dean of Humanities and Fine Arts, Dr. Bill Richardson, and the Provost, Dr. Robert Sheehan. For work at Delphi, the project is grateful for the support of the National Endowment for the Humanities, and the access to archaeological sites provided by the Hellenic Ministry of Culture and the American School for Classical Studies at Athens. Lastly, and perhaps most importantly, we would like to thank the students in Ashes2Art, without whom the project would not exist: in spring 2010 those students were Taylor Baldwin (digital models), Ryan D’Alessandro (digital models), Caitlin Jones (digital models), Braden Pate (web design), Evan Donnevant (lesson plans), Samantha Bailey (lesson plans), Preston Moorhead (research/archives), Jacquelyn Mascia (research/archives), and Jesse Nevins (research/essays).

REFERENCES

- BLUE, Lucy and RAMESES, S. (2006): *Lake Mareotis Research Project*. Report submitted to the Egyptian Supreme Council for Antiquities on the fieldwork and results of the September 2006 field season.
- BLUE, Lucy and RAMESES, S. (2007): *Lake Mareotis Research Project*. Report submitted to the Egyptian Supreme Council for Antiquities on the fieldwork and results of the May & July/August 2007 field seasons.
- FLATEN, Arne R. (2008): “Ashes2Art: Collaboration in Digital Humanities”, in *New Technologies to Explore Cultural Heritage* (National Endowment for the Humanities and the Consiglio Nazionale delle Ricerche): Rome & Washington, pp. 76-86.
- FLATEN, Arne R. (2009): “The Ashes2Art Project: Digital Models of Fourth-Century BCE Delphi, Greece”, in A. Flaten & A. Gill (eds.), *Visual Resources: an International Journal of Documentation*, vol. 25, special issue: Digital Crossroads: New Directions in 3D Architectural Modeling in the Humanities (12/2009), pp. 355-372.
- KHALIL, Emad (2010): “Waterfront Installations and Maritime Activities in the Mareotic Region”, in L. Blue (ed.). *Lake Mareotis: Reconstructing the Past*. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. BAR International Series 2113: 135-145. Archaeopress. Oxford.
- VILLANO, Matt (2009): “Expanding the Canon”, in *Campus Technology* (10/2009), pp. 26-30.