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INDEX

EDITORIAL
The beginning of a new experience

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JAS Arqueología S.L.U.

One year ago I was starting a new archaeological company. I tried to translate my personal projects into commercial products and encountered my first dilemma in this new adventure: How can I ask for a public Archaeology from the private sector? This journal is one of the answers.

Beginnings are always hard even more in these times of crisis we are suffering. Fortunately, *JAS Arqueología* has survived its first year and the first volume of *AP: Online Journal in Public Archaeology* is here, overcoming the hardest stage of its short life.

First of all, I would like to apologize for the delay in the publication of this first volume, but if editing a journal is hard, doing it in our current conditions does not help to make it easier. Secondly, I cannot continue without thanking Elena Papagiannopoulou for her inestimable role as Assistant Editor. This would have never been possible without her work and support. And thirdly, I also need to thank all the authors who participate in this volume for trusting us and setting the basis of what we hope will be a reference publication in the field.

A few months ago I decided to start the history of this journal with a pre-editorial that set the aims and the philosophy of this project. In it, I tried to define my vision of Public Archaeology. It is not far from other attempts and just pretended to sum up the blurry ideas that still grow up in the field with a synthetic and concise sentence that could fit all of them. In essence, the aim is to build up a new resource for archaeologists, in which we can discuss and share ideas, experiences and concerns.

This first number represents the beginning of a new experience, mainly with the participation of young researchers who, like me, are concerned about different issues around Public Archaeology.

If we had to propose a common topic for all the papers, it would be 'Education'. I like to say that all our problems could be solved with a better education, and most Public Archaeology activities have a bit of it in their essence. Using different tools, our aims converge on a better public understanding of Archaeology, and that is Education. Randomly (or maybe not that much), we will see this idea in all the papers of this first volume, starting with our cover image; Arminda.

One year ago I had the opportunity to meet Carmen Rodríguez, from Cueva Pintada, during a workshop in Addis Abeba. I was so shocked that even before starting the journal I knew I would like her to participate in something. She sent me the tales, some postcards and stickers and I definitely fell in love with Arminda. The first article of this volume is about the first steps of the project as well as its aims and results until now. I hope you will fall in love the same way I did, and do not forget to visit Cueva Pintada if you visit Gran Canaria.

The next three articles delve deeper in actual education. First, Sergio Moreno and Nicholas Márquez-Grant tour the last forty years of children activities, focusing on experiences in the United Kingdom and Spain. One of the issues that emerge is the lack of Archaeology in schools. This will be first analyzed by Amanda Erickson in her paper about outreach and education in Archaeology, and then complemented with Jessica Sutherland´s paper. There, she exposes her activities with children in USA schools, which keep growing today in number and variety.

The last paper introduces a slight change in the topic, focusing on video games. So far, there is not an extensive bibliography about them, but their value as educational materials is unquestionable and has been underestimated. Daniel García-Raso will examine their value and possibilities for Archaeology through different titles.

Now is the moment to introduce a new section; *Points of You*. Here we would like to offer you an open place to express your views in an informal way. We want to know how you feel about Public Archaeology in your region, your country or yourself. The section will be launched by Marlon Pestana, a Brazilian archaeologist that, like me, looks for a Public Archaeology from the private sector in a country that appropriated its Heritage recently.

We did not have much time to collect reviews of events and books, but will have one, by Dru McGill, about the last book published by *JAS Arqueología*; *The transforming ethical practice in Philippine*

archaeology, by Pamela Faylona. We encourage you to collaborate with us by sending us reviews of books, events, movies, music, trips, or whatever you consider that has something to do with Public Archaeology.

Five papers, one open letter and a review. That is all for this first volume. I would like to thank again all the people that have participated in it, and hope you all find these articles interesting and useful. The journal is open to everybody and you can participate in many different ways, from writing to commenting on Facebook.

So thank you all for helping make this real and I really hope you will enjoy this very first volume.

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Before letting you continue, I would like to make 4 fast announcements:

1. Call for debate:

When I say 'commenting on Facebook' two lines above, I mean that we will open a discussion board on the papers where we can continue the debate and growth of the contents. Doubts, considerations, ideas… New topics are also welcome. In order to keep the journal alive between numbers, this is the best tool we can offer right now. I Hope you will participate in it.

2. Call for papers:

After Volume 1, we are expecting to publish Volume 2 in 2012. We have an open call for papers where you can submit them whenever you prefer. Anyway, our estimations for paper submissions go for September as a good deadline for each volume, if we want to be on time for January. We are willing to receive new papers soon to be able to work patiently. Any idea you might have, email us. Specifically if you have any doubt.

3. Call for specials:

We will also be publishing special issues focused on different topics. Our first call is for the AP Journal Special Issue titled "Public Archaeology in vast infrastructure works", for which we are looking for papers on the archaeology conducted in mega-constructions such as airports, undergrounds, highways, etc., from

the perspective of Public Archaeology in any of its lines (politic and economic issues, education programs practiced, management, etc.). We encourage you to participate in it if you are in some way related to the project. If you have any doubt, once again, do not hesitate to write us.

We are also happy to accept any new proposal for other special issues that you can edit, or just drop to us. You can propose a topic and we will decide and agree the terms, always under the rules of the journal. So, if you have in mind a volume with a subject dealing with something related to Public Archaeology, please contact us and we will consider it.

4. Call for donations:

While *JAS Arqueología* is alive, it will take care of this journal. As you already know AP is a free-access journal and (al)so not for profit. Anyway, maintaining it is expensive, both in money and time invested. The philosophy of the journal is to provide the widest access at the lowest cost, but in order to increase the quality and efficiency of the content there is a need for funding that will depend on you.

This year we have to thank Giannis and Vicky for the first generous donation, which is helping a lot to ensure the near future of the journal. We will open a list of donors in the last page to thank everybody that is helping with their money and their time to make this project real.

Remember there are two ways of contribution:

-Direct donation via Paypal on our web page.

-Purchase of the paper version. There will be a fixed price of 30€. Just ask us.

AP: Online Journal in Public Archaeology Volume 1 -2011 p. 5-27

¡Hola! Me llamo Arminda... ¿y tú?
A global communication project for Gran Canaria´s Archaeological Heritage

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Abstract

The opening of the Museum and Archaeological Park of Cueva Pintada (Gáldar, Gran Canaria) was the culmination of the recovery of one of the most remarkable sites of the pre-Hispanic culture in the Canary Islands (Spain). A great part of the exhibition revolves around the figure of Arminda, a historical character that lived in the site during the late 15th Century. This character has also become the main figure in the different activities designed for children and families, such as tales, puppet shows, workshops, etc., in which this Canarian girl plays a central role. The project exposed in this paper is the work of an interdisciplinary team that has transformed Arminda into a loyal ally to transmit the contents linked to the pre-Hispanic period in Gran Canaria and especially to create a motivating environment for the public, able to transform the museum into a space for sharing, thinking and enjoying History.

Key words

Informal Learning, Dissemination of Archaeology, Public Programs, School Programs

Introduction

The opening of the Museum and Archaeological Park of Cueva Pintada (Gáldar, Gran Canaria) was the culmination of an integral recovery project for one of the most unique sites of the Canary Islands' pre-Hispanic culture. The discovery of this artificial cave, dug into the tuff and decorated with geometric paintings, took place around 1862,

as a result of the work in the farming terraces that, since the eighteenth century, buried the ruins of part of what was the pre-Hispanic village of Agáldar, the evolution of which has been dated between the 7th and 16th Centuries. Although in 1884 there was an intervention with the goal of allowing access to the interior of the decorated chamber, it was necessary to wait until 1970 to have the first draft for the musealization of this site. This intervention led to the discovery of the troglodyte complex in which Cueva Pintada lies, but also caused the rapid deterioration of its interior, a fact that led to its closure in 1982. That same year, the proceedings that resulted in the inclusion of Cueva Pintada in the National Experimental Plan for Archaeological Parks began. After 25 years of almost uninterrupted work, the Museum and Archaeological Park of Cueva Pintada opened its doors to the public on July 26th 2006.

A significant part of the museological speech in Cueva Pintada revolves around the figure of Arminda, a historical figure who lived in this pre-Hispanic settlement in the late 15th Century. This girl, daughter of the last *Guanarteme* (chief) of the Island, witnessed the terminal moments of the Canarian indigenous culture and the complex colonization process of the Island after the Castilian victory in the War of Canarias. This character has also become the star of the activities prepared for children and families; stories, puppet shows, workshops, etc.

The project presented on these lines is the result of an interdisciplinary teamwork, in which professionals of history, archaeology, museology, teaching, literature, media, music, visual and performing arts, socio-cultural entertaining, etc., have transformed Arminda in the most faithful ally of Cueva Pintada. Her synergy is essential today to convey the museum contents and especially to perpetuate a magical atmosphere that breaks the borders imposed by Time, creating a space to share, reflect and enjoy History.

Musealizing a sign of identity

The long history of Cueva Pintada has not remained disconnected from the evolution of the concept of Heritage and the increasing importance given to the public, as well as from theories and reflections on what the enhancement of Heritage entails (recovery, or activation of Historical Heritage, following other recent terms away from the Gallicism of the traditional one).

From the early stages of the drafting of Cueva Pintada's project, we were aware that the challenge of dealing with the enhancement of this great cultural resource did not only lie in the unquestionable value of the decorated chamber, but also in the high symbolic value it has for locals (Martin de Guzman *et al.* 1993). As Juan Francisco Navarro has recently noticed, and without mentioning the attraction that the 'Canary' or '*Guanche*' exerted among intellectual pioneers of nationalism in the late 19th Century, there is no doubt that the pre-Hispanic symbols became an unequivocal sign of the Canarian identity during Franco's dictatorship. This is how some sites, including Cueva Pintada, occupy a privileged place, have become landmarks, emblems that part of the public has assumed as icons of Canarian cultural identity (Navarro Mederos 2005: 32 -33). As we well know, the fundamental problem is that these symbols are internalized, stripped of all context and no questions are asked about the role they played within the society that generated them.

On this basis, the musealization of the site should assume and unravel the contextualization and re-reading of this sign of identity. The fruits resulting from the research program and the spectacular finds recovered from archaeological excavations that started in 1987, made possible, at last, the articulation of a museological story about the role of this site in Gran Canaria's pre-Hispanic society, as well as about the ways of life of men and women who inhabited the pre-Hispanic Agáldar. The museum project started from this indisputable fact: Cueva Pintada is, until today, the most prominent artistic and symbolic expression of the pre-Hispanic Canarians. Having taken this as a premise, one of the main objectives set was that, after the visit, the public would consider this artificial cave, despite its exceptional decoration, as only one element of the many that define Agáldar's pre-Hispanic society. Achieving this objective, among others, involved building a solid historical discourse based on the results of archaeological excavations and the rich written documentation that points out the complex conquest and colonization process of the Island (Onrubia 2003).

This is why, when looking at the uniqueness and motivator which managed to attract the interest and attention of the public, it was decided to take advantage of musealizing a site that would recreate that unique moment in history, with first-person narration of events by specific characters, in the scene where they took place. Thus, it was decided to focus especially on the period from the mid-14th Century to the early 16th Centuries, during which the Canary Islands plunge

into the late medieval world, which is already opening to the Modern Age. Cueva Pintada could become an excellent mediator to narrate this process, which was undoubtedly traumatic and violent. We sought to transcend the mere visit to an archaeological site, proposing to immerse the visitor into an authentic journey into the past, not without a dramatic effect, creating a magical atmosphere and space. As noted in 1999, there was a need to strengthen the main asset of Cueva Pintada, the symbolic, but providing a new content: there is no other site in Gran Canaria, or indeed in the rest of the islands of the archipelago, where to best experience this crucial moment in the history of the islands; the violent contact with the Crown of Castile (Onrubia *et al.* 1999: 134-135; Antona *et al.* 2002). On the other hand, it is true that there is also a need to think about the differences in the concern about this discourse between the population of the Canary Islands and the one that comes from the mainland or other countries. Hence, it was chosen to include hints, recognizable for the public of the archipelago, which did not disturb the understanding of others coming from different places and therefore unaware of certain historical facts or characters.

Figure 1. *Decorated chamber in Cueva Pintada*

To achieve this goal we have proposed a route in which a number of elements, both audiovisual and on display, provide information allowing that allows visitors to perform a rich reading of the archaeological remains, that go beyond the pure aesthetic pleasure so far raised by Cueva Pintada. The museum, which houses the projection room and the permanent exhibition hall, gives way to the archaeological park, in fact conceived as the great hall of the museum, where you can see the Indian village, visit the decorated chamber (Figure 1) and visit some recreations of ancient houses from Agáldar.

As this ambitious project was being run (since 1986), the balance has moved from a more conducive for research and conservation of archaeological remains approach, to the design of strategies that should facilitate their accessibility and understanding. The result is the most prominent proposal of musealization in the Canary Islands, and one of the most important in Spain.

"Museums that you feel in your skin"

After analysing the first visitor studies, it was confirmed that the first audiovisuals, which can be seen right after entering the museum, are one of the best-rated elements. We have to point out that this comments are based on the visitor studies conducted by Interpret-Art during the years 2006-2007 and the ones conducted in cooperation with the Universidad Autónoma de Madrid, directed by Dr. Mikel Asensio (Sáenz Sagasti *et al.* 2010: 172-175). The first audiovisual, immerses the visitor in the indigenous reality of the 14th and 15th Centuries. This projection is emerging emerged as a key element in measuring the success of the visit. Indeed, with contributions from new technologies, this first audiovisual has become a faithful ally when it comes to contextualizing this enclave. The visitor is drawn into the past and travels through historical moments of particular importance, in a journey in which empathy and emotion occupy a privileged position. It is important to remember that this story has several levels of reading, depending on the background and the interest of the visitor.

It also became evident that the message was not an erudite discourse for scholars that would only bore the lay public, which would be the majority of the visitors (Onrubia *et al.* 1999: 140). This is why an aesthetic ambience, with simple images that evoke emotions, was created from the beginning. We sought to contextualize the elements of the visit, giving them their current significance; the remaining fragments of a past society, men and women with faces that look like

ours, fragments to be analyzed rigorously in order to construct a story that becomes an invitation to participate and enjoy the adventure of knowledge (Santacana 2005: 646). The making of the audiovisuals has been complex, but we must highlight the exhaustive pocess of documentation, and the consensus among experts and other members of the team to create the scripts and images.

The importance of the audiovisual works and the fact that the Cueva Pintada is a key element in cultural tourism circuits have led the museum team to increase the number of languages available in the audiovisuals by three (English, German and French). Obviously, the people dynamizing the visit can do it in these languages and the major means of divulgation (*i.e.* the website and brochures) have also been translated.

Based on the reactions among visitors and a unique classification of museums, published by Mikel Asensio and Elena Pol about understanding the content in these kind of scenarios, we would include Cueva Pintada in those museums that you feel in your skin; defined by the authors as "*those who seek to go beyond the simple display, aim to raise, try to excite [...] the display directly guides the construction of images, of internal representations, of sequences and episodes, of mental scenarios, which will frame and facilitate the understanding of phenomena and concepts*" (Asensio and Pol 1998: 15-16 and 17).

The cognitive accessibility issues of a non-specialist audience regarding the discourse of the museum were tackled, mainly thanks to the synergy of the main protagonist, Arminda / Catalina de Guzman (Figure 2), a historical character who has become a faithful ally of the museum staff, an educator looking directly at the public from a screen (in the stereoscopic projection and in the panoramic projection). Thus, a good degree of empathy and a speech that fits in with the message for non-specialists is achieved, providing easy access to specific content that otherwise would be difficult to understand. In this learning process, the narrative provides a solid foundation that helps the visitor to consolidate learning (Falk and Dierking 2000: 48-49).

In the Cueva Pintada project it has rather been preferred to narrate than to explain (Lasheras and Hernandez 2005), to socialize knowledge, to convey it to the general public as a way to promote intellectual activity and the desire to learn and reflect as a source of satisfaction (Fatás 2004). The speech, in our case, is not about the objects, but about the people that have left us these objects, giving

them a greater role, so these ceramics, idols, houses, cave, etc. are made accessible within a historical reality. This approach does not come after seeing the reasons for the visit of a good part of the public ("*because I am Canarian*"), but rather with the aim to provide the public with a content and feelings about the society that left us this remarkable testimony.

***Figure 2**. Arminda.*

Since the Museum and Archaeological Park of Cueva Pintada opened, there were other challenges that needed to be faced, following the same pattern as in the development of the Cueva Pintada project. That is, through a careful planning, defining clear objectives for each of the following areas: research, conservation and divulgation. The focus in the latter can be seen in the aim of Cueva Pintada to become a reference research centre in the pre-Hispanic islands and the conservation methods for its special remains (*i.e.* volcanic tuff). The commitment of this centre to establish itself as an educational and social space, has not only affected the presentation of content according to criteria that make it accessible to all audiences, but has also led to designing a learning program to serve the diverse users, considering this place as a space for personal enrichment. Logically, particular attention has been paid to schools, so that Cueva Pintada will become a new arena to develop the teaching and learning processes.

There are various programs implemented to meet the needs of different types of audiences. Without a doubt, attention has been focused on children and families, especially because of the available resources and activities.

¡Hola! Me llamo Arminda... ¿y tú?: The objectives

The program *'Hola, me llamo Arminda ¿y tú?'* (*Hi, I'm Arminda, and you?*) is a milestone in the strategic lines of Cueva Pintada. Every planned action includes challenges in which, beyond doubt, there are elements already used successfully in the museum context. Thus, stories, puppet shows, workshops, music, etc., are not innovations by themselves. What is innovative is a series of principles:

- Their inclusion in the museum's design and discourse (not a program that comes "after" but "at the time").
- The formation of interdisciplinary teams that provide, from inside and outside the museum, the best of their knowledge areas and/or creativity.
- Quality as a principle in the management and creation of the different displays.
- Innovation in the general approach and in the communication and dissemination strategies.
- Ongoing evaluation of the various activities.

When undertaking an extensive program of communication, objectives must be ambitious, but at the same time affordable at the short and medium-term. The following objectives are the ones that have motivated this program oriented to children and families.

Figure 3. *Arminda stickers.*

General Objectives

- Contextualize Cueva Pintada in the pre-Hispanic culture of Gran Canaria.
- Transform Cueva Pintada into an area that evokes emotion and empathy to facilitate the understanding and enjoyment of Heritage.
- Convert the Museum and Archaeological Park into a stage for the development of programs for children and families.
- Promote research and innovation in the proposals, from all fields involved in the development of the latter: museum, educational, communication, promotional, informative, etc.
- Work on cross-cutting topics to be incorporated in the activities of Cueva Pintada: gender, intergenerational communication, attention to diversity, etc.
- Contribute to the conservation and recovery of Archaeological Heritage from preventive outreach proposals (using the definition by Mateos Rusillo 2008), which are designed as educational and corporate strategy.

Specific Objectives

- Transform Arminda, not only into the central character of the museum, but also into one of the axes of the program for children and families.
- Disseminate the educational program of Cueva Pintada in the insular context, breaking the boundaries imposed by the limits of the municipality in which the site is situated.
- Educate children and families about the fragility of Archaeological Heritage.
- Promote intergenerational dialogue (children and their carers).
- Transmit values associated with the acceptance of others and the recognition of the proper, miscegenation, and the enrichment that comes from cultural diversity and understanding.
- Promote the joint assessment of Historical and Natural Heritage as integral parts of a whole, raising awareness not only of historical but also of natural values, introducing the concept of Cultural Landscapes.

- Introduce gender perspective in the workshops, in a subtle but committed way. Not accidentally, the main character of this program is a girl.
- Address diversity with activities in which quality is more important than quantity (a smaller number of places available in activities means more personal attention).
- Grant an important role to new technologies in order to reach out to children (and by extension, families).

Methodology

The methodology followed by the team (consisting of professionals both from inside and outside the institution) was based on the following pillars:

- The establishment of the strategic lines of action, embodied in the museum and archaeological park.
- Detailed planning of the developed program.
- The formation of interdisciplinary teams adapted to the specificities of the program that develops the strategic lines.
- Ongoing assessment, understood from two perspectives: evaluation and monitoring.

The methodology of work with families and children is based on:

- Activities in which the audience becomes protagonist.
- Participatory and inclusive methodologies.
- Starting from the previous ideas, promote meaningful learning.
- In proposals involving families, try to redirect the intergenerational dynamics where the older "direct" the creativity and behaviour of the younger.
- Incorporate music, performing arts and symbolic games in group activities.
- Integrate audiences with special educational needs (people with physical or mental disabilities...), always promoting inclusion against exclusion.
- Integrate ICT, with www.armindaylacuevapintada.com, not only as an introduction and promotion tool but also for immersion into the Gran Canarian pre-Hispanic world.

The emergence of new technologies that, since a few decades ago, has marked the beginning of a revolution in the forms of management, production, communication, etc., and this program could not be excluded from this reality. From this conviction arises the idea of creating a website linked to the Museum and Archaeological Park of Cueva Pintada, www.armindaylacuevapintada.com, aimed specifically at children, including the program of activities and also other resources, such as videos and games. The website is designed to captivate this audience through playful elements that will make them familiar with the pre-Hispanic reality.

Figure 4. *Arminda in Planeta Gran Canaria.*

The evaluation of the program

Self-assessment means that after undertaking the different activities, the team involved in them carries out the evaluation sessions in order to detect potential problems or issues that could be improved. In a timely manner, this process also involves inviting teaching professionals of various stages of education to act as evaluators of the sessions.

There are actions in which evaluation is direct, as in the case of advertising campaigns (attainment of objectives) or the edition of tale-books (number of copies sold).

Concern about the quality of the visit and the public program offered, as well as about the understanding of the messages conveyed, has led the Museum and Archaeological Park of Cueva Pintada to develop external evaluation sessions since its first year. Evaluation is ongoing, as a strategy of continuous improvement in the various functions of Cueva Pintada: research, conservation and dissemination.

The data presented below are the evaluation results, obtained from questionnaires filled in by visitors after attending various activities in Cueva Pintada (puppet shows, workshops and family visits with Arminda as "exceptional guide"). The sample is representative of the population participating in activities in Cueva Pintada.

REFERENCE CARD

Sample: 85 visitors (adults accompanying children participating in the activities).

Period analyzed: July, August and September 2008.

Technique: Activity questionnaire.

Results: Participants in Cueva Pintada activities are, in addition to the children themselves, parents of a medium-high education level seeking for cultural quality leisure activities. They do not mind to travel, as most of them come from different municipalities to the one where Cueva Pintada is located (Gáldar).

Although the most common broadcast channel to learn about these activities is usually word of mouth, many activities have been discovered during the museum visit or via its web. Some people had heard about them during a previous visit to Cueva Pintada, as a lot of them had been there before. The fidelity of the visitors, therefore, seems to be satisfactory.

The satisfaction of visitors with the activities is excellent, highlighting the staff and organization of the event. The criticisms are specific and easily resolved in most cases. It is possible to consult some graphs in:

http://www.armindaylacuevapintada.com/ibermuseus/Ibermuseus/Evaluacion.html

Stages of the program

Since its presentation, after the opening of the Museum and Archaeological Park, the program featured by Arminda has been further developed and focused on a series of projects, among which the following can be highlighted:

- **The first activity for children, the tale *Arajelbén (¡Hasta otro día!) De cómo se conocieron Arminda y Fernandillo*.**
  [See you soon! How Arminda and Fernandillo met]

The need for a story/tale that would support the rest of the teaching program soon convinced the team to undertake an editorial project that surpassed the museum itself. For the first edition of Arminda's adventures, the Canarian writer Dolores Campos-Herrero was approached, as she already had experience in children literature. The writer worked closely with the staff in Cueva Pintada, that provided her with the information needed to define the characters and sceneries, while establishing the guidelines:

> *The stage*: the pre-Hispanic Agáldar and Cueva Pintada hamlet.
>
> *The characters*: Arminda had to become the main character structuring the tale. In addition, a new child character from the peninsula was created, making it possible to work on cross-cutting topics around the encounter of different cultures and the conflicts that this generates: fear of the unknown, acceptance, loss, yearning, conciliation, miscegenation, etc. This is how Fernandillo was born; a young Castilian who came from a distant land to help his father in conquering the Island.
>
> *The action*: it had to be related to the historical events that took place in Arminda's times, the turbulent period connected to the conquest of the Island by the Castilians.

The writing stage gave way to the illustration works. Agustín Casassa, connoisseur of every detail of Cueva Pintada's museographic project, as well as of the pre-Hispanic reality in Gran Canaria, was the professional chosen for this duty. After the first drafts, the main characters started to be put into shape. Arminda was created based on the character met by the visitors in the museum. The characters, the description of the environment, the evocations and the scenes where the action takes place, allowed the recreation of domestic spaces, landscapes, archaeological contexts, etc., that are of vital importance to introduce present the pre-Hispanic way of life: costume, goods, sites, economical activities, etc.

- ***Arajelbén* dramaturgy and the puppetry performance.**

In parallel with the birth of the tale, Rafael Rodríguez started working on the dramaturgy, while María Mayoral started creating the puppets, based on the drawings by Agustín Casassa. The choice of a particular technique, which was the foam doll, was successful. Visitors feel close to the characters, thanks to the skill of the maker and the involvement of the performers/handlers from Entretíteres Company, as well as the conductors of the activities.

Moreover, the activity continues after the play with a workshop of cut-outs, which reinforces the knowledge of the characters and the pre-Hispanic period. This allows the participants to create and take home the characters (Arminda, Fernandillo, Hitaya the teacher, the Drago, the owl, Guama the goat and the Moon), as well as the props, to continue with the play, inventing new stories and adventures.

Figure 5. *Arminda and the Drago in Arajelbén.*

- **Family tours to the site: *¡Hola! Me llamo Arminda ¿y tú?***
  [Hi! I'm Arminda, and you?]

After realizing Arminda's attractiveness, Cueva Pintada, Entretíteres Company and La Colmena (social entertainment), decided to design family tours to the site guided by Arminda herself and her puppet friends, mainly Fernandillo and Zarem the lizard. The scripts, prepared by the people working at the site, tell stories that mix the past with the present, Archaeology and History, in a recreational and participative way. The activity seeks to strengthen the intergenerational experience.

- **Arminda, Cueva Pintada's ambassadress, travels to other towns and islands.**

As a result of the hard work to prepare the different activities, several councils of the islands of Gran Canaria and Fuerteventura have invited Arminda to visit their schools and theatres. More specifically, the plays *Arajelbén* and *El Tesoro del Mocán*, could tour other regions presenting the pre-Hispanic culture of Gran Canaria.

Arminda also participated actively in other institutional events for the Island: tale marathons, puppet festivals, child leisure activities, Heritage seminars, and even *FITUR* (International Tourism Fair of Madrid). Arminda has become Cueva Pintada's ambassadress, but essentially and, most importantly, the symbol of Gran Canarian pre-Hispanic culture.

Figure 6. *Press release with Arminda.*

- **The education program for Educación Infantil (3-6 y/o) and Educación Primaria (6-10 y/o).**

When the time came to start preparing workshops specifically designed for schools, it was clear that it was impossible to employ Entretíteres Company for all the activities, but the characters created for the puppets could perfectly be used as teaching resources. Thus, the workshop *Ídolos, nubes y barro* (Idols, clouds and clay), was conducted during the 2008-2009 school year, with the aim to promote creative learning about the terracotta idols from the pre-Hispanic Gran Canaria. The activities were designed with La Colmena, in cooperation with teachers who validated the process and evaluated the first trial sessions with the aim to correct any possible mistake before offering the activity to schools.

During the 2009-2010 school year, a new workshop was developed. *Arminda quiere ser yerbera* (Arminda wants to be a herbalist) was developed with Dr. Jacob Morales Mateos, the specialist who studies the seeds and vegetal remains from Gran Canarian sites. The objective is for the children to learn about the different plants that were used by old Canarians, not only to eat, but also to treat different diseases. The tale *Arminda y la lágrima del drago* (Arminda and the tear of the dragon tree) is useful to see the natural environment where old Canarians lived, with an ecological approach along the activity. This tale has also been played by Entretíteres Company in Cueva Pintada and other locations in the Island.

- **At the rate of the seasons.**

Over the years some other activities for children and families have been developed; during vacations and weekends a number of workshops, designed by the museum and conducted by La Colmena, are offered. As the main activity of pre-Hispanic Canarians was farming, the seasons have been used to frame different activities:

Vive la primavera en la Cueva Pintada (Live the spring in Cueva Pintada).

Disfruta el verano en la Cueva Pintada (Enjoy the summer in Cueva Pintada).

Llega el otoño a la Cueva Pintada (Autumn arrives to Cueva Pintada).

En invierno, ven al calor de la Cueva Pintada (In the winter, come to the warmth of Cueva Pintada).

Under these topics, there are several activities, such as workshops linked to '*gofio*' (wheat or barley toasted flour, inherited from the pre-Hispanic period), clay, '*pintaderas*' (clay stamps with geometric shapes) and house building.

In all these activities, songs are essential; specifically designed for each activity, they are part of the introductory dynamics and help to break the ice among participants, both children and adults. Although she is not always present, Arminda is usually part of the activities. She is the link to the general program, but these season activities can run without her as well.

Results, prospects and sustainability

The expected results are directly related to the set objectives, both general and specific. The general objectives are much more difficult to evaluate and some –like the ones referring to preventive diffusion- have been set for the long term.

From the data obtained from the evaluation, we can say that the results have exceeded expectations. There is no doubt that getting the attention of the media has been a crucial element, propitiating the good end of this first wave, which made the participants first class mediators in order to expand it.

The museum has reached the whole Island, breaking the barriers imposed by the physical setting of the museum that, with no doubt, is a privileged scenario for many actions. However, that should not become an exclusive 'fief' for programs aiming to disseminate a series of values and contents beyond the physical limits of the museum equipment.

There are two far-reaching actions clearly measurable:

The advertising campaign: Every activity starring Arminda is filled to capacity and there is always a waiting list. Besides that, in 2009, professionals from the advertising sector awarded it as the best multi-support campaign in Las Iniciativas advertising festival.

The edition of the tales: The first tale (*Arajelbén*, 1500 copies) is already sold out and from the second (*El tesoro del Mocán*, 2500 copies) there are only few copies left.

Arminda has become a well-known character, recognizable by not only the people visiting Cueva Pintada, but by the whole Grancanarian society that identify her with the pre-Hispanic reality and have an interest for the Museum and Archaeological Park as well as the activities in which this familiar character performs.

Nowadays, Arminda still takes part in different actions that expand the program for children and families:

- Educative programs in cooperation with the Teachers Training Centre in Gáldar for which, besides the pre-Hispanic period, contents on Modern Languages (especially English), Biology or Geology are created.
- Work with Education Centres (IES Pablo Montesino o IES Santa Lucía), which develop cooperative learning using Cueva Pintada in some of their proposals.
- Consolidation of teachers' training courses (in cooperation with the Regional Government) to make the educational potential of Cueva Pintada in which Arminda takes part available to the teaching staff.
- Preparation of the third edition of the adventures of Arminda. It will come with new activities linked to the plot.

Cueva Pintada cannot turn its back on one of the programs with the best reception from the public. This is why there is a permanent contact with the team that made it possible, designing new activities to enrich it.

During the past year (2010), once the activities for families had been consolidated, the focus switched to activities for school children, especially of early stages, offering workshops where Arminda is the main character. The results of the evaluation have been essential to show the funders the necessity of and opportunities presented by continuing this program. The importance that has been given to the education program in the strategic planning of the museum, grants the technical and institutional support.

Conclusions

To conclude, we can establish a number of key elements that can help to make clear the efficiency of the program.

- The activities, which the presented program -¡Hola! Me llamo Arminda ¿y tú?- includes, aim to encourage the personal growth of the people who participate in them. The program is not just about learning more about Cueva Pintada and one of the most exciting moments in the history of the Island, but also about encouraging participation, reflection, communication, inclusion, etc., in an effort to make Historical Heritage a primary resource for social cohesion.

• As presented, the project is innovative in many of its approaches, particularly in the methodology of the implementation and promotion of the actions. The considerable amount of creativity emanates from an interdisciplinary team, in which each party brings the best of its wit and knowledge.

• The actions have sought to consolidate the Museum and Archaeological Park of Cueva Pintada in the local context, but one of their main objectives has been to break the barriers imposed by the museum's location in a remote region away from the Island's cultural hub (the triangle of top-rated museums is located in the capital of the province, Las Palmas de Gran Canaria).

Figure 7. *Arminda in the beach.*

• The impact, penetration and outreach of the program is illustrated by its competence to bring the public in the Island, to attract the media that have acted as amplifiers of the museum strategies and, ultimately, to bring the pre-Hispanic memory to different sectors of the society.

• This program seeks the inclusion, away from the exclusion of social sectors, regardless of the reason that provokes the latter. In this sense, the visitors who have participated in the activities have various backgrounds but, as shown in the evaluation, there are sectors that are particularly receptive to proposals of leisure activities related to Culture and Heritage.

• The methodological proposals have always been developed with the active participation and integration of all team members. This kind of approach is essential in teaching values and attitudes; listening and communicating with respect for the group are the pillars of the activities developed.

• The internal and external assessments are the basis for the activities developed, being, thus, one of the pillars of the strategic planning in the Museum and Archaeological Park of Cueva Pintada. This is how the team gains valuable knowledge about the effectiveness and efficiency of the program, as well as the issues to be reviewed and improved (especially referring to the facilities and occasional technical problems).

• The fact that the team consists of professionals from different fields, with connections in many different areas related to Culture, facilitates networking. A characteristic example is the inclusion of the museum's puppet shows at the Circuito Insular de Teatro, managed by the Cabildo of Gran Canaria, in collaboration with the municipalities of the Island, a fact that has allowed our character to travel around the Island.

• The attraction of this character (largely thanks to the extraordinary work done by the team of artists and educators that make this possible) is unquestionable. Hence, its continuity and sustainability can be ensured. The future scenario is to continue innovating and bringing new proposals, within this general framework offered by Arminda. In any case, it is needed to ration the proposals, not only to generate expectations for future actions, but also to redirect energy to other museum activities that are geared towards other audiences, for example, adolescents.

• Institutional and regional links and partnerships have arisen in different levels. Collaborations include publications of organizations such as the Obra Social de La Caja de Canarias and the possibility offered by other local entities to Arminda to travel around the Island or elsewhere. It would be important for the future to consolidate Arminda's contribution to the tourism sector as a mediator to attract new visitors to the region where the site is located, away from standard tourist destinations of the Island. According to the Tourist Board and some tour-operators, families may be attracted to the area by the museum activities.

• Finally, a line of work recently undertaken is to strengthen the relations with those responsible for education in various fields, including formal education (teaching centres and teachers' training centres under the Government of the Canary Islands) and informal education, such as occupational centres for disabled people, senior centres and the Town Office of Social Affairs.

General planning and coordination: Museo y Parque Arqueológico Cueva Pintada – Carmen Gloria Rodríguez Santana
Texts of the tales: Dolores Campos-Herrero Navas y Pedro Flores
Ilustrations of the tales: Agustín Casassa Caballero
Graphic design of the different materials: MAT creación gráfica
Dramaturgy: Rafael Rodríguez
Production: 2RC Teatro. Compañía de Repertorio
Puppets craft: María Mayoral / Bolina y Bambo
Play and handling: Roberto Pérez, Begoña Ramos (Entretíteres), con la colaboración de Pedro Pérez Hernández
Music: Rantanplán
Play and arrangements: Óscar Naranjo Iglesia
Songs for the workshops: Pilar Argüello y Nélida Saavedra
Activities in Cueva Pintada: La Colmena (Pilar Argüello, Nélida Saavedra y Luisa Martel)
Press and media: Mixtura – Estudio de Comunicación
Beach activities: El ojo de arena, Óscar Rodríguez
Educational resources for school children: MAT creación gráfica
Educational program 2008/2009: Nélida Saavedra Pérez
Educational program 2009/2010: Eulen
Activities for weekends and holidays: La Colmena

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Forty years of 'Archaeology for children'

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Abstract

The last 40 years have seen an increase in outreach activities, many primarily targeted to children, in archaeology. This outreach has benefited both the discipline of archaeology as well as public education. Several projects have pioneered the development of 'archaeology for children' in recent decades and have narrowed the gap between heritage and the public.

An overview of these developments is presented in this paper. Particular reference is made to the work undertaken in schools and museums, by associations and archaeological companies, as well as the promotion of archaeology through the media. Examples are drawn especially from the United Kingdom and Spain.

Key words

Education, Public Outreach, Archaeology, United Kingdom, Spain

Introduction

There is an ever increasing trend for museums, public institutions, private companies and even research centres to promote archaeology to children. Not only does archaeology present a number of advantages for child development (Dyer 1983; Durbin et al. 1990; Stone and Molyneaux 1994; Henson 1997; Owen and Steele 2001; Steele and Owen 2003) and providing an awareness of time and sense of chronology, learning about everyday lives and other times and cultures, developing an interest to know more, expanding vocabulary and developing skills including recognition, handling, observation, discussion, comparing;

but it also brings an awareness of the local heritage which can only be of benefit to the community. In addition, archaeology can be used to meet the targets of the national curriculum, partly due to its multi- and cross-disciplinary nature, covering a number of other areas including geography, biology, science, mathematics, technology, history, art and religion.

Today, the development and creation of new teaching resources for children attempts to find a perfect balance between scientific rigor, content and motivation. This is attempted in a number of formats: talks to children by archaeologists, exhibitions, books, interactive CDs, workshops, reenactments, guided tours around museums and archaeological sites, and archaeological summer schools amongst others. All of these resources have their own advantages and disadvantages. For example, the experience of 'traveling back in time' (*e.g.* 'living' as a Viking for a day) provides great motivation for children and sparks their interest. However, it may be that what is presented to the children are facts that may not come with any hypotheses, discussions or excluding a number of other interpretations. The way in which interpretations are constructed may be revealed by offering workshops such as 'being an archaeologist for a day', where children can use the methods employed by archaeologists, collect data and formulate their own interpretations to be later discussed in front of a group. The downside, however, is that these workshops primarily require a lot of organization, time, a number of facilities and space. By contrast, a book can be read at any time and anywhere, although it doesn't provide the 3-D 'live experience' of other activities. It is not the objective of this paper, however, to review these resources critically, but to provide a brief overview of 'archaeology for children' in its educational context during the last 40 years. With this regard, a few examples of the different resources available are provided, with special focus on Spain and the United Kingdom due to the authors' familiarity with these two countries.

For a large number of local museums, school trips comprise the bulk of the annual visits. These museum visits, organized to complement the school curricula, in addition to visiting archaeological excavations and the influence of television and other media, have raised an interest in the past and in exploring the past through. This has opened new education-related vacancies in museums, universities and other institutions; has raised the number of students studying the subject and has promoted government investment in heritage. Most centres today

have dedicated staff that deal with children's education and outreach. Researchers have also benefited from public involvement and this has also provided financial support and sponsorship for research.

In the 1970s and 1980s, projects such as the Butser Ancient Farm or the Jorvik Viking Centre, both in England, can be recognized as pioneering the way in which archaeology reached the community. They have both served as role models for a number of projects in relation to promoting archaeology to the general public, and especially children. The former, began as a proposal put forward in 1970 for a working prehistoric Iron Age farm. On its adoption, the project was run by archaeologist Peter Reynolds and opened to the public in 1974. Butser Ancient Farm now provides hands-on experience in ancient crafts and Iron Age farming in particular, and is also a research centre in experimental archaeology. The Jorvik Viking Centre, which opened its doors to the public in 1984 in the city of York, is a visitor centre built on the original site of the excavations that were undertaken of Viking Age structures (*e.g.* houses, workshops). The visitor centre reconstructs Viking York and takes the visitor in a journey back in time. There are also displays on how the archaeological excavation and post-excavation analysis were carried out and the type of information that was retrieved. The Jorvik Viking Centre also offers DIG, which is a centre that provides activities for both children and adults with a real-live ongoing archaeological excavation in York itself. Another inspirational centre is the Sagnlandet Lejre in Denmark, which opened in the 1960s as an experimental research centre and currently also boasts a whole range of educational activities.

As a result, a number of projects, which have transformed the relationship between heritage and the public, have arisen and developed in the last twenty years: historical reenactments, reconstruction of archaeological sites, archaeology workshops or summer schools, multimedia resources, and publications (*e.g.* workbooks for children) are some of the resources on offer. It is certainly extremely rare today to find a museum that will not have an education and outreach department. This runs in parallel with local and national governmental bodies that continue to maintain sites of historical interest so that they can be visited by tourists and the general public. In the USA, for example, archaeology has expanded greatly in its outreach to primary and secondary schools even to the point that outreach is part of the fourth principal in the archaeological code of ethics established by the Society for American Archaeology (Levy 2006: 57).

Today, the opportunities and resources for teaching archaeology to the public are diverse. The objective of this paper is thus to provide a general overview of the main activities or resources employed to teach archaeology to children. These include publications, site visits and museums, archaeological parks, archaeology in schools, media and multi-media amongst other resources.

Publications

The amount of children's books or published literature with an archaeological and historical focus is vast. For instance, the bibliographical list published by the Archaeological Institute of America includes around 300 publications in the English language for children. The volume, published by a number of museums such as the British Museum and bodies such as the Council for British Archaeology, amounts to over 100 dedicated to history and archaeology for children. This includes not only books specifically for children, but also books for teachers of archaeology and history primary and secondary education (*e.g.* see Henson 1996, 1997). English Heritage produces a range of publications with regard to teaching about the historic environment and it offers a free copy of *Heritage Learning* to schools.

In addition, there are a number of associations for children which publish their own magazines that are also available to the general public. In the UK, the Young Archaeologists' Club (YAC) has a magazine subscription (*Young Archaeologist*) aimed at 8 to 16 year-olds primarily. In France, the magazine *Arkéo Junior* provides archaeological news to children aged primarily between 7 and 14 years. Both magazines aim at promoting the human past, as well as the techniques used to learn about the past with a number of articles, photographs, drawings and updates on museum exhibitions and events. Other countries have also magazines, such as DIG in the USA. Comics have also been crated such as *Descubriendo Nuestro Pasado* ('*Discovering our Past*') from Chile.

Site visits, Museums and Exhibitions

Museums continue to be one of the main promoters of archaeology to children. The types of museum activities for children on offer range from displays, handouts and drawing resources, to workshops, hands-on activities, specific thematic educational tours, multimedia resources, reenactments and archaeological excavations. Museums such as Le Musée National de Préhistorie (Les Eyzies, France), Le Musée de Carnac (France), or the LVR-LandesMuseum (Bonn, Germany), provide guided

tours not only around the museum's facilities but also to archaeological sites in the region; and they offer workshops adapted to the different curricula and age groups on different aspects of prehistoric life. Sites such as that at Grand-Pressigny (Indret-et-Loire, France) also welcome school visits and provide excavation experience to children (Marquet and Cohen 2006). In Spain, the Museu Arqueològic de Catalunya (Barcelona) manages a number of museums and monuments that fall under the same educational project, through which schools can take up to ten hours of their curriculum load to going to the museum. In other museums, display cabinets are also helpful in promoting archaeological techniques and interpretation to the public (e.g. Museo Arqueológico de Alicante, Alicante, Spain; Museo y Parque Arqueológico Cueva Pintada, Gran Canaria, Spain (see this issue); Museo Arqueológico Regional, Alcalá de Henares, Spain). Some museums (e.g. National Museums of Scotland, Edinburgh, UK) have had original artefacts that are hundreds of years old for children to touch, handle and observe.

One of the museums that have pioneered the educational offer is without doubt the British Museum in London. This museum is one of the most visited in the world, and offers all sorts of activities and workshops for children of different ages. The number of activities and resources for example for Ancient Egypt or Classical Greece is comparable probably to a few if any other museums. It also includes activities for families, adult continuing education and is also well equipped for special educational needs.

Figures 1-2. *Archaeology one week summer school at the World Heritage necropolis of Puig des Molins in Ibiza (Spain).*

The authors have participated, coordinated and run summer schools for children at Spanish museums. For example, at the museum of Puig des Molins (Ibiza, Spain), one week workshops were run throughout the summer for children aged between 8 and 12 years (Mezquida *et al.* 2003; Márquez *et al.* 2003; Figures 1 and 2). The workshop consisted of the excavation of graves and plastic skeletons and artefacts with the objective of presenting archaeology (and especially its techniques) to children and also raising their interest in the past and the historical heritage. It was an opportunity to allow children to learn about their local history and in a way that learning was multidisciplinary by using a number of skills used in mathematics (measuring), biology (human anatomy), geology (soils), drawing, etc.

Finally, it is worth mentioning that archaeological companies, such as Wessex Archaeology or Canterbury Archaeological Trust (UK), Arqueolític and JAS Arqueología S.L.U. (Spain), or Archeosistemi (Italy), offer a number of outreach programmes to schools and the general public.

Archaeological Theme Parks

Archaeological parks have resulted in one of the most successful formulae in relation to promoting archaeology to the public. There are a number of very interesting projects throughout Europe, some of which have been in existence for 30 years. This is the case of *Archéosite* in Aubechies (Belgium), inspired by the Gallic-Roman sites in the region; or the fortification of *Eketorp,* in Öland (Sweden), which is an Iron Age fort that was completely excavated between 1964 and 1974 and subsequently reconstructed. Both archaeological parks use historical recreation or reconstruction as their teaching tool with the opportunity for visitors to dress as they did in the past and therefore submerging themselves in history. Not only are Archéosite and Eketorp visitor centres, but they are also centres for research in experimental archaeology.

Another concept is that found at the city of York, with a heritage that is one of the better managed in Europe. The York Archaeological Trust has had considerable involvement in a number of nationally recognized projects aiming at involving the public in heritage and archaeology. The Trust offers a great quantity of teaching resources, from books, to photographs, to online resources. The *Jorvik Viking Centre* is a reconstruction of what life was like in Viking York, based on the excavations at Coppergate and allows visitors to 'travel back in time'. It also displays how archaeologists and scientists have reconstructed Viking life in York from the archaeological evidence found. DIG, from the same owners who created the *Jorvik Viking Centre*, is an on-going excavation for children and is based around the concept of 'live archaeology'.

Slightly different are the parks at Sanglandet in Lejre (Denmark) and *Butser Ancient Farm* in Chalton (UK), both of which are primarily research centres. Pioneer centres in experimental archaeology, both were born from a scientific and educational vocation. The park at *Sanglandet*, founded in 1964, is the oldest in Europe and one of the better managed. Regarding its educational offer, it is also based on the

concept of 'travelling back in time'. Its educational programme includes a summer school that offers children the possibility to live during three days as a Viking. The *Butser Ancient Farm*, which opened its doors to the public in 1974 as previously mentioned above, is based on a similar idea for the Iron Age and Roman periods. It originally started as an experimental farm and now offers an educational package for different levels of the English National Curriculum.

English Heritage has a Regional Education Officer in different regions of England. This officer provides advice to teachers on using the different historic buildings, monuments or archaeological sites as an educational resource.

In Spain, there is a number of projects inspired by some of the above examples. This is the case of *Arqueopinto*, *Parque Arqueológico Gonzalo Arteaga*, in Madrid, which opened its doors in 1994, or *Alorda Park*, an Iron Age settlement in Calafell (Tarragona), built in 1992 following the model of Eketorp Castle in Sweden. Both sites offer themed visits and a considerable number of activities for children. Other research centres have also opted to offer educational resources, inspired by the work of archaeological parks. This is the case of the Centre d'Estudis del Patrimoni Arqueològic de la Prehistòria at the Universitat Autònoma de Barcelona in Barcelona, which is a centre comprised of researchers and school teachers. It has a small archaeological park dedicated exclusively to educational activities and has developed projects in collaboration with other secondary educational centres in Europe.

In spite of what has been stated above, historical reconstruction is still a resource that is seldom used. More frequently one opts for the traditional ways of delivering information like display cabinets, a course around a site or guided tours. A special case is that of the prehistoric caves of Lascaux in Dordogne (France) and that of *Altamira* in Santillana de Mar (Spain). Due to the fragility in the conservation of the paintings, the access to the interior of the caves is extremely restricted. The importance of these two sites justified the construction of exact replicas destined for the general public. The *NeoCueva*, which is part of the Museo de Altamira in Santander, and Lascaux II, located about 200 m from the original cave, offer the visitor the possibility of contemplating exact replicas of the images without degrading the original. The Museo de Altamira has a wide array of educational opportunities directed to the public and, in the case of *Lascaux*, it is also possible to take a virtual visit on the internet.

Archaeology in Schools

Much has been written about archaeology in schools (*e.g.* Dyer 1983; Henson 2000; see also Márquez-Grant 1997). Schools are great channels for promoting archaeology, sometimes by running lunchtime archaeology clubs, field visits, visiting museums, designing 'time capsules', running an excavation in the school grounds, by asking an archaeologist to visit the school and give a talk, or simply by using visual aids and artefacts in the classroom.

A wide range of resources can be used in the classroom, including artefacts, old archives and aerial photographs amongst a number of examples (see Henson 1996, 1997), all of which help develop skills such as measuring, developing attention to detail, drawing, interpreting, etc. (*e.g.* see Márquez-Grant 1997).

Other ways of promoting Archaeology

Young Archaeologists' Club

In the UK there is the Young Archaeologists' Club (YAC) which falls under the umbrella of the Council for British Archaeology (CBA). The Young Archaeologists' Club began in 1972 (it was then called 'Young Rescue') and now has over 70 local branches across the United Kingdom and over 3,000 members. It offers activities and a magazine (*Young Archaeologist*) to its members, who are primarily aged between 8 and 16 years-old.

National Archaeology Days

Once a year in the UK there is the Festival of British Archaeology (once known as the National Archaeology Week). During this week, primarily run by volunteers and museums, the public has the opportunity to experience over 100 events relating to archaeology with many hands-on activities (both for children and parents), guided tours, exhibitions, and visits to a number of heritage, archaeological and historical sites.

Media and Multi-Media resources

Television has raised a lot of awareness and has increased public interest in archaeology, especially in the case of Britain with the series '*Time Team*' (Channel 4). Other series have followed, such as '*Meet the Ancestors*' (BBC) or '*Coast*' (BBC).

Another type or resource has been a number of multi-media packages; for example, '*Desenterrando el Pasado*' ('*Uncovering the*

Past'), developed by the Institute of New Technologies of the Spanish Ministry of Education. Another example is a resource designed by one of the authors (SM) in Catalan and covers the archaeology of the island of Ibiza (Spain), with two CD's ('*Descobreix Puig des Molins*' and '*Eivissa un viatge en el temps*'), which are used in local schools (Figure 3).

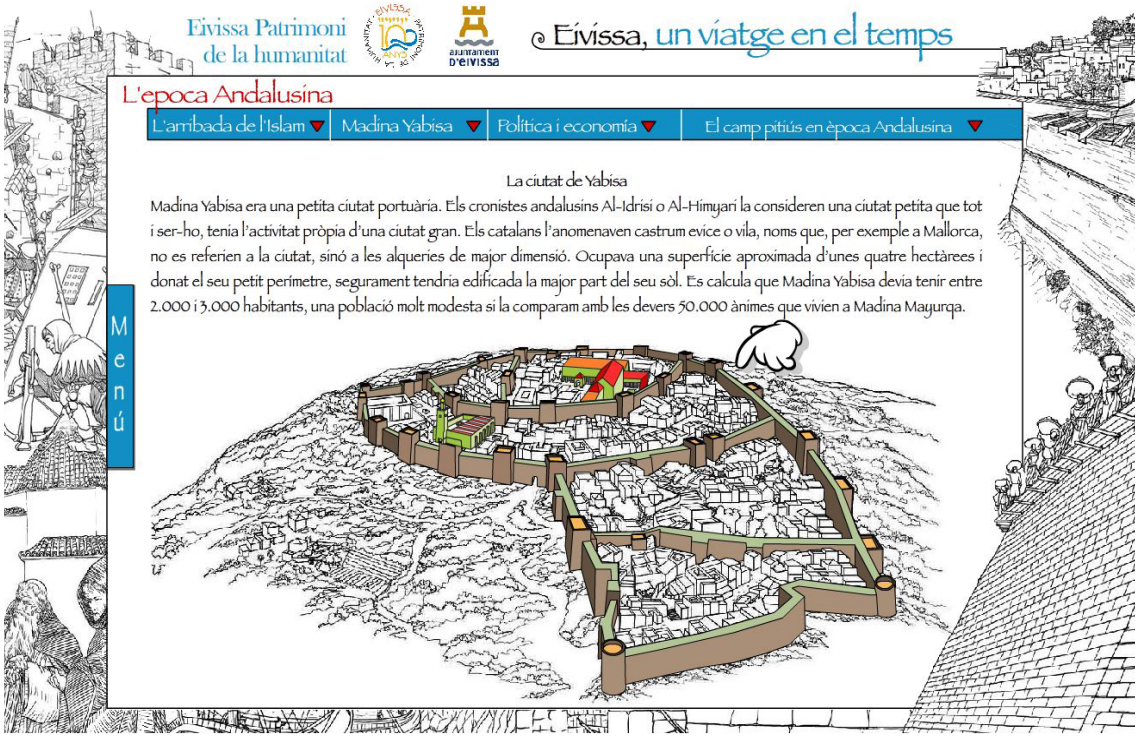

Figure 3. *Interactive CD "Eivissa, un viatge en el temps", edited by the Ajuntament d'Eivissa (Ibiza, Spain).*

Conclusion

In conclusion, and returning to the title of this article, the scientific community has increasingly been more conscious of the role that education plays to bridge the gap between science and society. Archaeology in the last forty years has certainly developed an important role in child education. The experiences that have been carried out in recent decades have attempted to bring archaeology closer to children, and to further promote archaeology to the general public. Examples of some of the resources indicated above are proof of this. These outreach programmes, as well as the inclusion of archaeology in the school curriculum have both been of great benefit to research and the conservation of our heritage.

Today, more than before, there is an 'Archaeology for Children'. There has been a change in the concept relating to the way archaeological findings are presented to the public, be this at museums or at the sites themselves, and it has been primary school children that, on many occasions, have been the primary target. It is of course evident that there is still a lot of work to be undertaken in order to improve resources, and also to bring archaeology closer to the public by providing access to everybody, no matter the age. Nevertheless, certainly 40 years later, there is a strong base set for future developments in promoting archaeology to children.

Although modern technology, such as DVDs or CD-ROMS, is fun, interactive and can be made available at home, traditional resources in the classroom will always play a major role in promoting archaeology to children and making it accessible to everybody regardless of social and economic background.

Future work should focus on including more archaeological input in the national curriculum either as part of History or as a separate subject.

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Useful web sites/resources

Publications:

Publications list of the Archaeological Institute of America:

http://www.archaeological.org/pdfs/education/biblios/AIAkids_books.pdf

Children's books of the British Museum:

http://www.britishmuseumshoponline.org/icat/childrens_books/

DIG magazine (http://www.digonsite.com/)

Descubriendo Nuestro Pasado comic (http://www.arqueologos.cl/?q=comic)

Educational resources/offers at museums

British Museum:

http://www.britishmuseum.org/learning.aspx

English Heritage:

http://www.imagesofengland.org.uk/learningzone/lz/curriclinks.aspx

Musée de Carnac:

http://www.museedecarnac.com/public_scolaire.htm

Museu Arqueològic de Catalunya:

http://www.mac.cat/cat/Oferta-educativa

Archaeology and educational companies

Wessex Archaeology:

http://www.wessexarch.co.uk/

Arqueolític:

http://www.arqueolitic.com/

JAS Arqueología S.L.U.:

http://www.jasarqueologia.es/

Archeosistemi:

http://www.archeosistemi.it/

Archaeological Parks

Archéosite:

http://www.archeosite.be/

Eketorp Castel:

http://www.kalmarlansmuseum.se/1/1.0.1.0/274/1/

York Archaeological Trust:

http://www.yorkarchaeology.co.uk/

http://www.yorkarchaeology.co.uk/resources/resources.htm

Sanglandet:

http://www.sagnlandet.dk/

Butser Ancient Farm:

http://www.butserancientfarm.co.uk/

Centre d'Estudis del Patrimoni Arqueològic de la Prehistòria de la UAB:

http://cepap.uab.cat/

Museo de las cuevas de Altamira:

http://museodealtamira.mcu.es/

Lascaux:

http://www.lascaux.culture.fr/

[also accessible at http://www.grands-sites-archeologiques.culture.fr/, from which we can see the archaeological survey for

France and visit on-line some of the most important sites in the country]

Clubs and societies

Young Archaeologists' Club:

http://www.britarch.ac.uk/yac/

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Outreach and Education in Archaeology

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Abstract

There is often a disconnect between archaeology and the education system. Archaeologists, as well as educators, can use many aspects of archaeology to help teach children about science and history in multi-disciplinary ways. However, archaeology is not included in the curriculum of the United Kingdom.

The role of commercial archaeology is also essential in this, because they also have a responsibility of informing local communities about the archaeology they are doing. By making strides to include archaeology in the classroom by educators and continuing it in archaeological practice by archaeologists, children will be better informed about what archaeology is and how it works. Also, teaching children about archaeology can help to provide them with not only a greater understanding and appreciation for archaeology and but also its application of the scientific method outside of the typical spectrum of science courses.

Key words

Educational Role, Commercial Archaeology, Public Interaction

Introduction

Archaeologists have an opportunity to provide the public with access to their pasts and the history of their local area. Yet, unfortunately, one of the basic ways in which this opportunity could be provided is often neglected. The education systems in many countries, specifically the United Kingdom for the purpose of this discussion, often neglects this chance by failing to include archaeology in their national curricula.

Alternatively, the chance for educational outreach from those in the field is also often neglected. So, while the education system fails to provide for the inclusion of archaeology, the people actually doing the archaeology are just as much at fault for this lack in transfer of

information. Perhaps, many times, everyone assumes that the education system knows what is best for teaching children. Consequently, they may forget to look deeper into what is actually happening and actually being taught. When this occurs, subjects like history and science are taught without presenting practical applications for the topics, which would include subjects like archaeology, anthropology, or other areas that could provide cross-disciplinary avenues for education. Ultimately, there must be a compromise between the archaeologist and the educator if any sort of solution is to be found. The educator must realize the value that archaeology can present to the education of children and the wider public. In turn, the archaeologist must also realize that the burden of education cannot stop at the educator's door.

The ability to think beyond the norm is something that archaeology and other interdisciplinary subjects can provide. This paper intends to examine the problem in the relationship between education and archaeology, the reasons as to why those in the field do not necessarily promote archaeology and education, and the positive aspects that compromises such as curriculum-based resources from archaeological units can provide. As a note, these scenarios will also discuss the situation of archaeology and education in the United Kingdom, as a discussion of the global state of archaeology and education is not possible within the confines of any singular discussion.

Archaeology and Education

Everyone has a right to their past. Not only that; the public has a right to learn and understand archaeology. At any given point, during any given day, there is most likely some form of archaeology going on in the area. While this may not be the actual digging, the work associated with it is happening. Perhaps there is research going on into the background of a site, analysis of the information found from an excavation, or even the writing of reports themselves. There is always archaeology happening because there is always new history being discovered.

With this in mind, what is the point of all this work if the public is unaware of, uninformed, or uninterested in what is going on? Many museums and sites are making a great effort to try to provide the public with a greater sense of the meaning of archaeology. "*There is a widely shared conviction that people have a right to a meaningful past*" (Grima 2002: 84). However, the bigger issue is how to make archaeology meaningful to people if they do not have a general

understanding of what it is to begin with. This lack in information and this state of being uninformed about archaeology is a repercussion of the fact that archaeology is not part of the curriculum being taught.

One of the biggest problems of not including archaeology in the curriculum is that it becomes something that people are not familiar with. As children, they are taught the basics for understanding math, science, language, etc. However, by failing to include such concepts as archaeology, they are not exposed to it at a level where they could begin to understand everything that it is and everything that it could offer them. Consequently, this leads to misconceptions about the field of archaeology and unrealistic expectations from archaeologists that can never be lived up to. "*The local archaeologist visiting his local school or teachers centre is likely to have these preconceptions forced upon him and he may find himself expected to perform as the all-knowing expert on the Romans, the Neolithic, and probably the Victorians too, when he only wants to be able to talk about his consuming interest in postholes or whatever*" (Clarke 1986: 9).

Also, by not learning about archaeology in school, children are never given the chance to have it as a part of their frame of reference as they grow up. For example, archaeology is not something that they would be aware of in daily life because it would not be something that, unless they learned it through a different medium, they would have been exposed to. Another way to say this is that people are simply more aware of the world around them when it is in terms of something that they understand. Children will most likely never be able to process something in the manner of the scientific method if they were not exposed to it at some point in their life. "*The popular image of archaeology needs to be broken down and replaced with a flexible approach to specific skills and methods that can be relevant to different levels in schools*" (Clarke 1986: 9). In order for children to understand what archaeology is, they need to be taught about it in school and not just as an aside to their regular history lesson.

Archaeology would be a useful method for trying to convey such concepts of the scientific method while incorporating history. Another important point to note in the use of archaeology is its ability to provide children with the idea of the use of evidence (Clarke 1986). They would be able to take many different avenues to try to find the purpose of a site or an artefact even. For example, they could use historic buildings, other artefacts, historic documents or maps, geology, and even landscape studies to try to come to an answer. "*Understanding*

the nature of evidence, being able to evaluate it, and use it to make hypotheses and reach informed conclusions are skills that have uses beyond archaeology" (Clarke 1986: 9).

Children in primary school are at the most impressionable stages of their lives. It is during this time, that many children learn the basics of their knowledge as well as establish their own personal goals and understandings of the world around them. Many archaeologists will admit that they decided to go into archaeology at a young age. However, like Peter Clarke has pointed out, by encouraging the study of archaeology for children, archaeologists are not trying to convert a whole new generation to the field. They instead support the inclusion of archaeology into the national curriculum feel that children have a right to a subject that can provide them with many of the tools for inquiry and understanding that cross-disciplinary work can provide. Additionally, it is also important to focus on the early Key Stage groups because children have the option to stop studying history after Key Stage 3 and follow different paths of study.

However, in pointing out the need to include archaeology in the curriculum, it is necessary to note that there are instances where the subject of archaeology is alluded to. For example, in some of the requirements for teaching history, the curriculum states that the teacher should ensure that:

> "*Pupils should have opportunities to learn about the past from a range of historical sources, including artefacts, pictures and photographs, music, adults talking about their past, written sources, buildings and sites, computer-based material*" (Corbishley 1999: 74-75).

Even though this is an example showing that the topics generally covered by the sphere of archaeology are present, it does not actually cover or name the discipline itself. It is essential that the term archaeology be used in order to stop this cycle of people being unaware of the subject and unfamiliar with what it entails.

Another way to do this is to make sure that the training and education of teachers includes archaeology. How can anyone expect teachers to share and encourage archaeology if they themselves know nothing about it? For example, "*there is still a cycle of deprivation here in teaching history. First pupils learn out-of-date ideas about history, and that archaeology sometimes helps here and there. Then these students go to teacher training institutions where there is no one to put*

the record straight. In turn they [then] pass the infection on to their pupils" (Corbishley 1999: 77). By being more familiar with archaeology, teachers are able to teach it better. In turn, children become more familiar with and have a better understanding of archaeology. This scenario is much more desirable than the one of an endless cycle of misinformation, which only leads to people being misinformed and not understanding archaeology. These people then go to sites like Stonehenge in the UK and only see a circle of big rocks that they have been told they want to take their pictures in front of, rather than the greater landscape that encompasses the whole site. In this example, Stonehenge does not seem to mean much to the general tourist because the general tourist has never been taught how to understand what Stonehenge means in a larger picture of history and archaeology.

Archaeology and the Archaeologist

The claim that those in the field of archaeology do not generally promote archaeology in education does not mean that archaeologists do not want to educate the public. Very often, most archaeologists have the ideal that they are protecting and preserving heritage for everyone. Yet the problem in the relationship between the archaeologist and the public becomes apparent when the archaeologist does not necessarily do anything to encourage this relationship of education. Most in the field are working with an end in mind. They have research goals and questions that they want to answer. However, it seems that many times the public gets left behind in the quest for knowledge –therein lays the irony. What is the point of all this research if the people for whom it is supposed to be done are unable to receive any benefit from the work?

The field of archaeology can basically be split into two groups. There are those that do it for research or academic purposes and there are those that do it in the commercial sector as a sort of salvage or contract archaeology. Both of these sets work very hard and do a lot to protect and preserve the archaeological resource but how often are they able to contribute to the education of the public? There are many factors as to why this is not always done. To be clear, it is not fair to say that no outreach or education is done by either of these groups. Because, more often than not, the average archaeologist would prefer to have the unlimited budget and time to provide information to the public. It is, however, important to note the reasons why many in the field are unable to contribute to education in order to show why it is

necessary to include archaeology in the curriculum and why curriculum-based resources are so important as a supplement to teachers who do recognize the importance of it.

One main factor that many in the field do not focus on archaeology and education is the constraints in budgets. Public education programs cost money. More often than not, most researchers are limited to the grants that they receive. And, generally, when it comes to budgeting out the money for the project, the first item to go is the public outreach program. Many feel that while the latter are important for informing the public on what is going on, they are not necessary to the success of the project in the research sense. Additionally, this is one of the largest limiting factors for commercial archaeology units. Their research is based on the money that they receive from their clients. As a result, they are often bound to the budget that they have set out with the contractor.

A major factor in the educational role that commercial archaeology can play is the client for whom they work. Despite any beliefs that the archaeology unit may have for or against outreach education, they are limited to what the contractor requests in regards to the project. While there is legislation requiring that before development contractors have to adhere to standards determining whether or not archaeology needs to be performed, there is no legislation requiring contractors to conform to or promote any sort of education for children or the local community. This, however, seems to make no sense. If contractors are required to have an archaeological survey done, should they not also then be required to make some sort of effort to provide an educational resource if, in fact, the archaeology performed results in the recovery of any archaeological data that is relevant to the community?

An equally important point to make is the ability for commitment to education by those in the field. As previously mentioned, it seems that money is one of the driving forces and factors in the outreach of those in the field to education. Since money is usually limited, the amount of effort that is put into community and public education is limited as well. Clarke, however, recognizes the problem in this as he describes the idea that commitment to archaeology in education has to be long term or else it will fail. "*Presenting archaeology for the wrong reasons (as a hollow 'community' element in a Manpower Services Commission project proposal, for example) without the commitment to the long-term development that is required is likely to be less than successful*" (Clarke 1986: 9). The community has to be able to see the

commitment of the archaeologist to their education in order to be able to fully commit to the education and information that the archaeologist could provide. This is similar in the relationship of a child to their teacher. The child ultimately respects and has a relationship with the teacher that involves trust and the understanding that the teacher will follow through with their commitment to education. A relationship like this also bases a lot in the trust that the children will have in the teacher to provide them with accurate and correct information. As a result, if archaeologists make promises to provide education and a resource to the community, they must follow through with this commitment in order for the community to trust them and the information they provide, ensuring thus the relationship between archaeologists and the community, rather than just furthering the divide with broken promises.

The Compromise

The big questions for these two areas of curriculum and the field of archaeology are: How can anyone expect the public to be knowledgeable if no one is making an effort to make a change? If archaeology is not required in the curriculum and educational outreach is not required in commercial archaeology, how are children and the rest of the public to receive any information or education on the subject at all? The answer lies in the art of compromise.

By examining the relationships of archaeology and education and education as a factor in the field of archaeology, it makes it easy to see the benefits that compromise between the two areas can provide. Since the curriculum is not currently changing to involve the topic of archaeology and since it is not required for professionals in archaeology to outreach to the community, the only solution is members from each group coming together to create a solution. Members from each side have recognized the benefits that the other can provide for the education of children and, ultimately, the general public. This solution is most often found in the collaboration between archaeologists, especially in archaeological units and other researchers, and educators. The benefits that curriculum-based resources from archaeological units provide are a perfect example of this solution.

Rather than just continuing to try to solve the issue of archaeology and education, those in archaeological units have also used this scenario as a means with which they can connect with their communities. Many units have found that the most important part of their clientele is the

community that surrounds them. While the efforts may not always be huge, several units, such as the Canterbury Archaeological Trust and LP Archaeology, have made the effort to connect with the public and be the educational resource that is lacking. Unlike many archaeologists, archaeological units are able to be more of a part of the community. They are not limited to research based projects and sites that will most likely be available for an extended period of time. They are involved in projects that directly impact the community and sites that are most likely going to be destroyed. For example, most of the survey work that these units perform is a precursor to development that will come after it. As a result, the unit is also aware that they are the last line of protection for the potential archaeological data that is at the site. They realize that it is their responsibility to accurately record the information available. Unfortunately though, as previously mentioned, many of the units are limited to budgets along with the demands of contractors and other clients and are unable to provide wide scale community educational projects. But the effort that they can make in order to at least be a resource of information is still useful and, simply, better than no effort at all.

Conclusion

The fate of archaeology in education is not bleak. There are many who are working towards a solution whilst the debate for archaeology in the curriculum continues. As of now, archaeology is only an aside to subjects in the curriculum in the United Kingdom. Hopefully, soon it will be recognized for the benefits that it can provide both for children and the general public.

There are several archaeology units that are an excellent example of the type of outreach that many archaeologists and educators should aim to achieve. Not only do they provide information that is both accessible and understandable, but they are also committed to creating a positive relationship.

By examining the roles that archaeology plays for education in the curriculum as well as in commercial archaeology, members of both fields will be able to see the necessity for teaching archaeology. If it is left out, children are denied a wealth of information and knowledge that would be applicable the whole of their lives. If it is included, the cycle of information and knowledge can continue and, overall, the benefits would greatly exceed any of the opposition points anyone could bring up.

In conclusion, archaeology units that are creating and applying curriculum-based resources are providing a great opportunity to both educators and children. By doing so, they are allowing the chance for archaeologically-based education when and where perhaps otherwise there would be none.

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For further information on children's education after key stage 3, see the Parent Centre's website:

http://www.parentscentre.gov.uk/learnjourn/index_ks4.cfm?ver=graph&subject=a1

For further information on the Canterbury Trust see their website:

http://www.canterburytrust.co.uk

For further information on LP Archaeology see their website:

http://www.lparchaeology.com/

For further information on the Prescot Street Site excavation by LP Archaeology see their website:

http://www.lparchaeology.com/prescot/

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'Archaeology Time with Miss Jessica'

Archaeology education in summer schools and summer camp in the Upper Peninsula of Michigan.

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Abstract

Archaeology education benefits not only archaeologists, but also teachers and students. It fosters future stewards of our cultural heritage while making any classroom lesson more exciting and engaging for the students. In an effort to realize both of these goals, the author undertook an archaeology education programme in her local area of Upper Peninsula Michigan using a dual approach. She coordinated and implemented archaeology education activities in four local elementary schools during summer school, on a weekly basis, and developed and led an archaeology summer camp for children in conjunction with a local chapter of the 4-H Club. Teaching methods and activities varied between the two approaches; however, object handling was a key component of every lesson. Activities included learning about the instructor through examining objects she had brought from home, the dustbin game and skeleton game, a wastebasket excavation to learn context and stratigraphy, a mock excavation, a pot-mending activity, the creation of a museum exhibit, a "Maya Math" activity using the Maya numbering system, and a human evolution activity using replica hominid crania. Each approach presented its own challenges and rewards, but ultimately the author was able to inculcate over one hundred future stewards of our cultural heritage.

Key words

Archaeology, Education, Object Handling, Mock Excavation

> *[…] a child went forth everyday and the first object he looked upon and received with wonder, or pity, or love, or dread, that object he became, and that object became part of him for the day, or for a certain part of the day, or for many years, or for stretching cycles of years […]* – Walt Whitman

Introduction

Archaeology education is a relatively young field within public archaeology, only a few decades old (Jameson 2004: 50; Davis 2005: 4). This recent, burgeoning interest in educating the public about archaeology demonstrates a greater awareness of and appreciation for the positive results of this education. While archaeology education includes the entire public in its scope, the author's particular interest lies in teaching children about archaeology. The goals of educating the adult public in archaeology can also apply to teaching children. Archaeology education benefits not only the archaeologists, but also the teachers and students. Nurturing future stewards of our cultural heritage is perhaps the primary goal of archaeology education. Smardz Frost (2004: 80) notes that this field "*is generally unabashedly agenda-driven: public archaeologists work very hard to instil the stewardship message in as many members of the public as they can reach*". Similarly, giving children an understanding of the concept of context and an appreciation for the vast quantity of documentation that an archaeologist must complete would potentially make them less likely to loot sites as adults and more likely to contact a professional archaeologist when needed. Another goal that benefits archaeologists is that educating the public about archaeology may also lead to "*further increases in visits […] to museums, monuments and sites*" (Ucko 1994: xix). Finally, teaching young people about authentic archaeology at a young age may make them less likely to believe alternative archaeologies as adults.

One way in which archaeology education can accomplish these goals is to convince schools that archaeology taught in a classroom setting benefits both teachers and students. Archaeology is, inherently, hands-on object-based learning, it is new and different to the students and they are incredibly curious about it. These strengths allow the learners to be more engaged with the lesson. Indeed, "*many teachers are convinced that encounters with real objects enrich learning*" (Pye 2007: 22). Finally, since archaeology is a multi-disciplinary field, it can fit naturally into every subject taught in a classroom, and make those lessons more exciting for the students (White 2005: 2).

Summer Schools and Summer Camp

In an effort to realize these goals, the author undertook an archaeology education programme in her local area of Upper Peninsula Michigan using a dual approach. The first aspect of the programme consisted of coordinating and leading archaeology education activities in four

local elementary schools during summer school, on a weekly basis. The second approach involved leading an archaeology summer camp for children in conjunction with a local chapter of the 4-H Club. Each approach had its own challenges and rewards, but the author believes that each was successful in its own way.

Between June and August of 2010, the author led archaeology programmes at four elementary schools: Houghton, Dollar Bay, L'Anse, and Baraga. She visited Houghton and Dollar Bay Elementary Schools once per week during that time, and worked with two groups of children per visit, for an hour per group. Houghton Elementary had four groups of children total, divided by grade-levels: 1st grade, 2nd grade, 3-4th grade, and 5-6th grade. Dollar Bay Elementary had two groups of children divided into an older group (grades 5-8) and a younger group (grades 1-4). The author was only able to visit L'Anse Elementary twice during the summer and Baraga Elementary once.

The archaeology education programme at the elementary schools placed greater emphasis on teaching the students about archaeology as a discipline, rather than focusing on specific time periods or cultures. The secondary goal was for the author to gain experience teaching, to test out her ideas and activities, and to demonstrate the usefulness of archaeology education to the teachers.

Teaching young people in a summer school setting rather than in a typical school-year setting had both challenges and rewards. One of the challenges was that there were never a consistent number of students in each class; numbers fluctuated daily. This made it difficult to build on the knowledge and skills gained in previous lessons and required the instructor to start each lesson with a 'recap' activity for the new students. The author also worked with a large range of ages of students in a single class (*e.g.* a gap of three years between the oldest and youngest students) and needed to design her activities accordingly.Alternatively, summer school offered a less academically rigorous setting in which archaeology did not need to fit into an aspect of the state curriculum in order to be included in the classroom (although it undoubtedly can). In this way, the author was allowed great freedom in deciding the content of the lessons, restrained only by time and the materials available to her.

On 28-30 July 2010, the author's archaeology education programme expanded to its second approach – an archaeology camp for nine children aged eight to thirteen, through the local branch of the 4-H Club. The 4-H Club is a programme that teaches young people about

science, engineering, technology, healthy living, and citizenship through hands-on activities (4-H Club 2009). As the instructor, the author was granted the freedom to set the maximum number of children allowed to attend (which she set at ten) and the ages she would prefer to work with (eight to thirteen). These guidelines were listed in the brochure for the camp, as was the cost for attending (although her services were voluntary). The Carnegie Museum in Houghton, Michigan, hosted the camp for two hours per day for three consecutive days.

The 4-H Club archaeology camp had the additional goals of showing the students the importance of documentation during an excavation and teaching the students about local history (historic to prehistoric). Finally, the author thought it was vital demonstrate to the students that archaeology is more than 'just digging' and that it is not finished after an excavation is completed.

There were a few challenges that the author encountered while being the camp instructor that she had not encountered during the summer school portion of the programme, including the lack of a second teacher or teacher's aid to enforce discipline and to help keep the children on task. The camp also required a great deal more preparation on the part of the instructor, with no outside assistance and no monetary compensation for her time and effort.

Archaeology Education Methods

The archaeology education programme employed a variety of methods to accomplish its goals. Unfortunately, due to archaeology education's young age, it "*has not yet established a canon that defines accepted content and practices*" (Davis 2005: 4). The author, therefore, was responsible for choosing the activities that she used, based on her own judgment. She was careful to ensure that the activities were an equal mix of fun and learning. Indeed, Zimmerman (2003: 10) notes that "*[i]f we want to get our messages across to the public, we need to find ways to teach that are entertaining and intellectually enlightening*". Saturno (1997: 22) rightfully cautions that the entertainment portion should not be of the 'shock and awe' type: "*Teaching archaeology as a series of amazing discoveries and persistent mysteries utilizes the subject's mass appeal but ignores its best qualities*". The author's programme endeavoured to provide a balance between excitement and education.

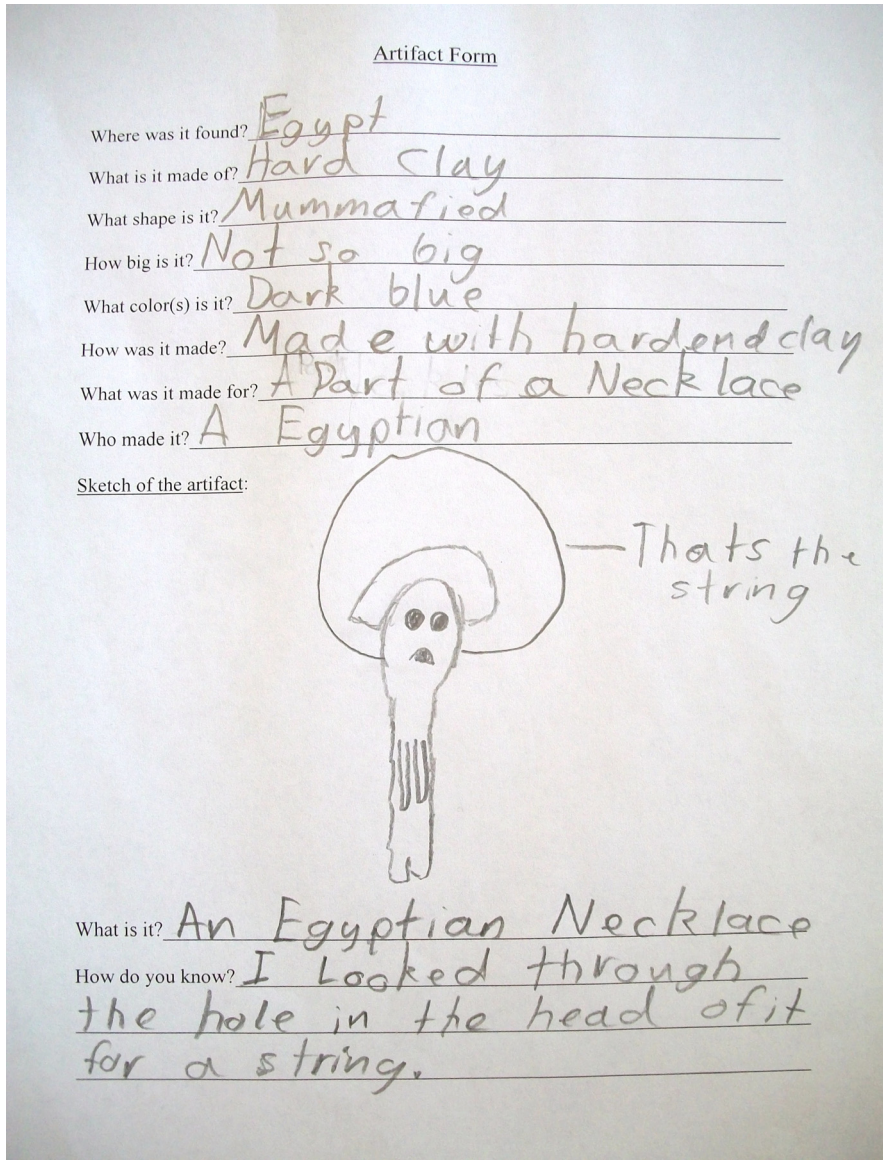
Additionally, rather than directly addressing alternative archaeologies or misconceptions about archaeology, the author

attempted instead to be a good example of authentic archaeology. As Holtorf (2005: 548) states, "*the only true remedy for professional archaeologists is to try harder at practicing a socially and culturally meaningful archaeology themselves*" (as cited in Lovata 2007: 21). The author would add 'and presenting that to the public' to the end of Holtorf's statement. She did ensure that the children knew that archaeologists study people rather than dinosaurs, but had the children not brought dinosaurs into the discussion, she would have kept them out. She believes that the mention of aliens or dinosaurs in connection with archaeology would simply conflate the ideas with archaeology in the children's minds.

The methods utilized in the programme were mainly based around object handling activities, with a foundation in constructivist theory. McAlpine (2002) notes that the Reading Museum's evaluation of their handling programme in local schools indicated that seeing and handling real objects is indeed an effective aid both to learning and to retaining the ideas and information associated with the objects (as cited in Pye 2007: 22). Constructivism focuses on the learner and asserts that the learner constructs his/her own meaning, and in turn, museums are now focusing more on empowering the public to interpret the past for themselves and providing them with the tools to do so (Bishop 2008). Fortunately, object handling easily conforms to constructivist ideals. The author therefore attempted to be more of a facilitator rather than a teacher in her lessons. She gave the children the tools they would need to reach their own conclusions rather than giving them a lecture in archaeology. The author additionally endeavoured to allow the students to learn about archaeological principles through associations with their own lives (Cochrane 1999: vii).

The first, and most common, method the programme employed to teach children about archaeology was bringing in artefacts for the children to hold and touch. Initially, the author used unique objects that she had around her house. Later in the programme, she developed a connection to Michigan Technological University's archaeology department, and was given permission to borrow artefacts from their teaching collection. For the first lesson, she brought in three different artefacts from different time-periods and cultures, and one 'mystery' object kept hidden in a box. She discussed with the children what archaeology is, including who we study and how we study them. The author then told the children that she needed their help in figuring out what was in the mystery box, but that they needed to learn to think like an archaeologist before they could help.

The instructor then asked the students to describe the first 'practice' artefact rather than simply telling her what it was, since in describing an artefact, archaeologists often learn about it in greater detail and are more likely to be able to draw conclusions about it. The instructor employed the Socratic Method to teach the children – beginning with eliciting simple observations about the artefact from the young people and moving into eliciting inferences about the culture 'behind' the artefact as the activity went on. After the children had satisfactorily answered the questions, she would tell them any information that they were unable to ascertain themselves.


Artifact Form

Where was it found? Egypt

What is it made of? Hard clay

What shape is it? Mummafied

How big is it? Not so big

What color(s) is it? Dark blue

How was it made? Made with hardend clay

What was it made for? A Part of a Necklace

Who made it? A Egyptian

Sketch of the artifact:

Thats the string

What is it? An Egyptian Necklace

How do you know? I Looked through the hole in the head of it for a string.

***Figure 1**. Artefact form completed by student*

The students then moved on to the 'mystery box' object, which was an object they had never seen before. The author believed it was important to demonstrate to the students how a logical process of description and visual/tactile inquiry could lead them to identify the unfamiliar object. She found that the use of the 'mystery box' gave the children a goal to work towards and motivation to learn the skills necessary to identify the object. This activity was included in both the summer school approach and the summer camp approach, and was used with all ages of children. To make the activity more challenging and more authentic for the older children, the instructor asked them to complete 'artefact forms' that she created herself (Figure 1). These students gained a greater appreciation for how archaeologists record their finds. The instructor used this artefact handling activity at the beginning of each session in the schools (using different artefacts) in order to teach the new children the concepts of archaeological inquiry quickly.

After the young people learned to describe an artefact and think about the people 'behind' it, the instructor began the next activity. She brought in several of her own 'artefacts' that described herself. She then asked the children to tell her about herself from her things. The author believes that using these modern 'artefacts' made the archaeological concept of objects imbued with information about their owners more accessible to the students. Once the children were finished telling her about herself, the instructor asked them to imagine that the artefacts were buried for one hundred years. The author then asked the children to determine what would survive if archaeologists discovered these artefacts in the future, and what information would be lost if certain artefacts were not recovered. Thus, the students learned that the archaeological record is never complete.

This activity naturally led into the 'Skeleton Game', which was an interactive, rather than object-based, activity (Figure 2). Zimmerman (2003: 11) is a proponent of interactivity in archaeology education, specifically advocating making the activity personal to the people involved, using examples from their daily lives. Taking his suggestion, the author asked for volunteers from among the children to play dead. She usually asked for two volunteers, one child with a great deal of metal (glasses, jewellery, belt buckles) and one without much adornment. The students learned that much more would be recovered from the child with adornment and therefore archaeologists would have the opportunity to learn more about that student than the student whose

skeleton only remained. The young people also learned the types of information that archaeologists can learn about a person from his/her skeleton. The interactivity inherent in this game made it enjoyable for the children as well as educational. Indeed, the author had many children volunteering to 'be dead'. Another advantage to this game, that the author noted, was that she was able to pick the disruptive children to play dead, telling them that they were not allowed to move or talk while 'dead'. A more peaceful lesson ensued.

Figure 2. *The Skeleton Game (photo by Elise Nelson)*

Activities designed to teach the archaeological concepts of context, stratigraphy, and relative dating followed these first three. Teaching context involved the author using an object that the students had handled previously (in this case, a spear point), and discussing with the children how an object by itself does not teach archaeologists as much about the culture that made it than if it was found with other objects. She then laid out three different 'contexts' (a child playing dead, a stuffed animal, and a pile of stone tools) and sequentially placed the artefact in each context. She would ask the children to tell her how the meaning of the object changed in each context and what different types of information they would be able to infer about the artefact in each context.

Learning about context naturally segued into a mock excavation. Wastebasket excavation has "*been used and written about several times […] always in the context of elementary education as a way of teaching archaeological principles to children*" (Zimmerman 2007: 211-212). White's (2005: 30) method involves gathering wastebaskets from different areas of the children's school that would show clearly distinct patterns of discard. The children would then 'excavate' the garbage cans in a stratigraphic manner, sort the contents by level, and interpret the results to determine in which room each trashcan had originated (White 2003: 30-31). The instructor would ask the children questions regarding which objects were placed into the trash before others. In some schools, the author would use the trashcan located in the classroom in which she was teaching rather than gathering garbage from other locations. This allowed the younger children to make connections to activities that had occurred in the classroom and to date them successfully. In this way, the students learned the principles of excavation and relative dating in an accessible manner that was relevant to their classroom and to their lives.

The author's archaeology education programme employed all of the methods mentioned above in both the summer school and summer camp settings. However, due to the various challenges associated with each approach, certain activities were only used in one setting or the other. The activities used only in the summer school setting will be discussed next.

Pot mending was an activity designed to give the students an appreciation for the amount of time and patience needed to reconstruct the pieces of a ceramic, to allow the children to gain skills in spatial awareness, and to instil in them the knowledge that still takes place after the excavation is complete. For this activity, the author asked each school to purchase small terracotta pots for each child (one school was only able to find large pots, and so bought a single pot for each class). The instructor discussed how archaeologists rarely find intact ceramics and often reconstruct them in the lab. The young people decorated their pots, then put them into paper bags, and proceeded to smash them on the playground. The younger children did not have the level of patience necessary to wait for water-soluble glue to dry (the correct type of glue to use while pot mending), so the teacher dispensed hot-glue to mend their pots.

The author would suggest that if an archaeology educator desired to teach children aspects of archaeology other than the basic

principles, he/she should start with what he/she is interested in and knowledgeable about. Therefore, the author desired to instruct the summer school students in 'Maya math' due to her interest in Maya archaeology. She began the lesson by bringing in images of Maya art to discuss some basics of Maya culture before beginning the math lesson. Saturno (1997: 9) justifies his use of 'Maya math' as an entry point into the study of that culture because 'mathematics and counting are universal'. The author's motives were similar, but with the addition of her desire to demonstrate to the teachers that archaeology can be applied to the subject of math, and will transform it into a more enjoyable experience for students who perhaps would otherwise be uninterested. Indeed, she heard one student exclaim "*this is fun!*" while doing a multiplication problem – an exclamation seldom heard in the context of math education. The author followed Saturno's (1997) model of teaching the children the Maya numbering system, but with the addition of hands-on materials to represent the numbers. She gave the children four beads (each representing 'one') and three pencils (each representing 'five'). The children then proceeded to count as high as they could with the objects they were given (since there were only four beads and three pencils, the highest number they were able to produce was nineteen). The author was then able to discuss the fact that the Maya used a vegesimal numbering system, or base-twenty. The young people then solved math problems using Maya numbers. For the older children, multiplication and division problems were used, while the younger children were challenged sufficiently with addition and subtraction.

The final activity used only in the summer schools was a lesson in evolution, using replica hominid skulls borrowed from Michigan Technological University's archaeology department's teaching collection. The author desired to make use of the replica skulls in the university's collection to introduce the students to the concept of evolution at a young age (Michigan's state curriculum does not require the children to learn about evolution until they are in high school), and to engage the children with an exciting and scientific activity. The author modified a worksheet she located online which required the children to note the different features of the craniums that changed over time and why these features changed (Nickels 1999). The teachers told the author that the students all enjoyed the lesson and also retained a great deal of information about the subject.

The archaeology education programme utilized two methods during its summer camp approach that the author was unable to apply

to a classroom setting. These consisted of a mock excavation and the creation of a museum exhibit. The instructor wanted the students to have the opportunity to engage in an excavation in order to more fully understand and appreciate the process and to be able to apply the skills and knowledge they had gained in the previous activities. She decided to have the children engage in a mock excavation rather than an authentic excavation for three reasons. She does not believe that young people aged eight to thirteen were capable of competently excavating a real site, she does not believe that a site should be excavated merely for the goal of teaching students excavation techniques, and she wanted to be able to control the content of the excavation (including the levels and the artefacts in each level).

Figure 3. *Gridding the 'Site'.*

The author thought that it was important for the students to learn local history as well as archaeology, since she had the opportunity to tell a story about the past using the excavation. Since the summer camp took place at the Carnegie Museum, she decided to construct the excavation to represent the history of the site where the museum is now located (from historic to prehistoric times). She endeavoured to retain as much authenticity as possible during the excavation; she borrowed real artefacts from the university, consistent with the time periods she desired to represent (*e.g.* an historic shell casing to represent the time when an armoury was located at the site). The instructor introduced the students to the tools that an archaeologist uses during the first day of the camp and discussed each tool's function and proper use. She also gave the students some background information about the site of their 'excavation' and made sure that they understood that archaeologists undertake research to develop a hypothesis before deciding to excavate a site. The young people then formulated their own hypotheses regarding what they wanted to learn from the 'site'.

The instructor decided to divide the students into pairs, with one child excavating while their partner screened the soil, for a total of four groups. Therefore, she required the children to grid the site into four equal units; since she was using a container as the 'excavation', she was unable to make the units a standard size (Figure 3). The students cleared the surface and performed a surface collection. They learned how to take a proper photograph of an artefact, including the need for a scale and a north arrow. They then bagged and labelled the artefacts.

When the students began excavating, the instructor had to stop them occasionally to remind them not to remove an artefact as soon as they had discovered it. Eventually, all she had to do was ask 'What do you do when you find an artefact?' and the students would remember that they should leave it in situ for the time being. She also needed to remind them to excavate by scraping across the unit rather than digging down into it with their trowels, but again, they soon caught on to the concept after she reinforced the method (Figure 4). The instructor also provided the children with excavation journals, level forms, and artefact forms reproduced from White's (2005) sample forms. She designated the oldest student to be in charge of the Munsell Soil Color Chart and to determine the soil colour of each level. When she created the excavation, she attempted to fill each level with a soil that would be distinguishable from the levels above and below it (including a stratum of ash representing a burn event), so the students

would be certain to encounter a soil change and therefore the start of a new level. The author would also like to note that it was important to plant small objects in the mock excavation to give the screeners something to find so that they will not become bored.

Figure 4. *The 'Excavation' in progress.*

During the third and final day of the summer camp, the instructor asked the students to interpret their finds and to create a museum exhibit about their interpretations for display at the Carnegie Museum (Figure 5). These activities were an important aspect of the camp because it taught the children that archaeology is not finished after an excavation is complete. The author and the children discussed what happens to artefacts discovered during an excavation, and the miniscule percentage of artefacts that museums display compared to how many are in storage. Before the students began work on their exhibit, the instructor asked them to explore the museum in order to pick a favourite exhibit and to be able to explain to the rest of the students what made that exhibit their favourite. The author and the children then discussed what constitutes a 'good' exhibit. The students decided to arrange their exhibit chronologically (by stratigraphic level), and to not display duplicates of artefacts. The instructor had brought her laptop, on which the students typed artefact labels and case labels. These labels were then printed out and mounted. The exhibit was on display to the public at the Carnegie Museum for a month, after which the university required the return of their artefacts for the start of the new school year.

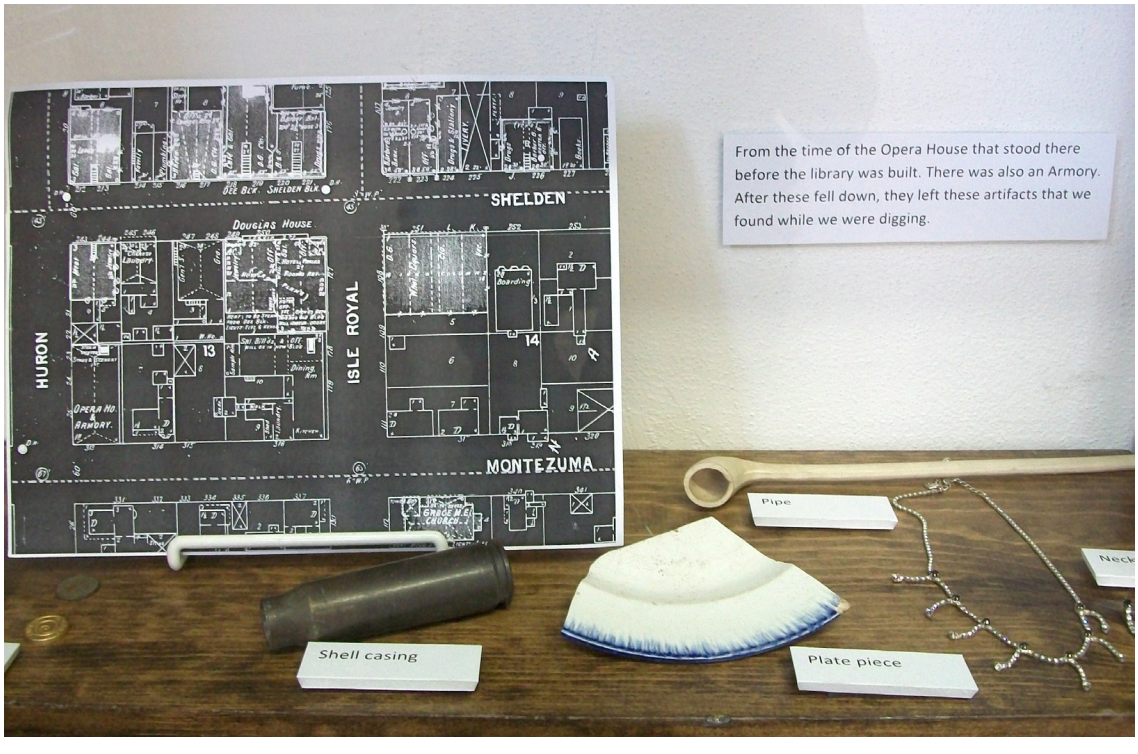


Figure 5. *Part of the Museum Exhibit created by the students.*

After the students completed their exhibit, their parents were invited to a small reception at the museum, during which the children were able to show their parents what they had accomplished and to tell their parents what they had learned during the camp. The author was able to gauge the results of her teaching by listening to the young people interact with their parents. The parents asked questions to the child, and through the child's responses, the author observed that learning occurred. The author was humbled to observe that even students whom she thought had not benefited as much from the camp had a great deal of accurate information to impart to their parents. One should never assume that the disruptive children are not learning.

Conclusion

If the author were able to run the archaeology education programme for a second time, she would expand on certain aspects of the programme and add others. She realizes that she should have included some type of evaluation in order to determine how much the children learned from the programme. Certainly, students do not always learn everything that instructors teach. However, it would have been difficult to evaluate the effectiveness of the summer school approach since the children attended sporadically. The author would also expand the programme to older students, young adults, and home-schooled children.

The archaeology education programme reached over one hundred young people during its three-month run. Utilizing the elementary school approach, the author was able to teach more students, but perhaps not as deeply as she was able to reach the students at the summer camp. Due to the differences inherent in each approach, her teaching methods needed to differ as well. Using primarily hands-on, object-based learning, the author endeavoured to instil in the children an appreciation of and respect for the past. Employing activities that allowed the students to connect archaeological principles to their daily lives inculcated in them a deeper understanding of archaeology as a discipline. Leading these activities in a classroom setting allowed the author to demonstrate to the teachers the effectiveness of archaeology as a teaching tool for all subjects (indeed, Houghton Elementary asked her to return during the school year for more archaeology education). By being a good example of authentic archaeology, and by teaching students about it at a young age, the author believes that the children will be less likely to believe alternative archaeologies as adults, and will be less likely to loot sites. As the poet, Walt Whitman, noted in the

quotation at the beginning of this article, objects can create powerful emotional connections to children and to people of all ages. By using the inherent power of objects, archaeology educators are fostering the next generation of stewards of our cultural heritage.

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Watching video games
Playing with Archaeology and Prehistory.
Retrospectives and perspectives into the image that videogames spread about a scientific discipline and the humankind past.

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Abstract

Video games have become a mass culture phenomenon typical of the West Post-Industrial Society as well as an avant-garde narrative medium. The main focus of this paper is to explore and analyze the public image of Archaeology and Prehistory spread by video games and how we can achieve a virtual faithful image of both. Likewise, we are going to proceed to construct an archaeological outline of video games, understanding them as an element of the Contemporary Material Culture and, therefore, subject to being studied by Archaeology.

Key words

Video games, Prehistory, Archaeology, Contemporary Material Culture

Introduction

From an anthropological and archaeological perspective, video games have become one of the most representative elements of the Twentieth and Twenty First century's material culture. Moreover, from a commercial point of view, they exceed both the film and music industry in benefits. What began as a recreational form of amusement for kids and teenagers appears now as a narrative audiovisual medium open for all ages, which also has a single characteristic that differentiates it among other forms of narration: interactivity. Some video games still present a pure leisure facet, like sports or driving, but a great percentage of them offer a story with characters, screenplay, soundtrack and plot that the player has to unravel and finish, becoming the leading actor of this particular experience. Could we be becoming witnesses of the birth of the eighth art? (*e.g.* García-Raso 2010).

In this regard, some works of this artistic software, in the same way as other forms of audiovisual narration from the popular mass culture such as cinema (Hernández-Descalzo 1997) or television (Boyd 2002; Russel 2002), have pictured both Archaeology and Prehistory offering a certain image of them and permitting the player to turn virtually into something similar to an archaeologist or prehistoric human being. Obviously, most of the cases of this virtual reality parallel the dead wrong popular concept of Archaeology and Prehistory, in which archaeologists are treasure and tomb raiders in the Indiana Jones style and prehistoric human beings coexist with dinosaurs.

However, video games have occasionally depicted correctly some aspects of Prehistory, having though failed in many others. Educational video games have also been published in the recent years, showing, in a trustworthy manner, what working in archaeology really entails, although they lack the quality of the blockbuster video games.

Through this paper I want to achieve three essential aims. First, to define briefly but concisely video games from an archaeological point of view, understanding them as an unavoidable compound part of the contemporary material culture. I will also analyze some video games that have reflected issues concerning Archaeology and Prehistory, focusing on both the mistakes and accuracies. To end this paper, I will try to give suggestions about how video games and the new technologies related to them may help to spread a proper vision of Archaeology and Prehistory.

Videogames as material culture

If an archaeologist of the Twenty Fifth Century were digging a site from the Twentieth Century and/or the early years of Twenty First Century (for instance, a household or a mall), he or she would regularly find some of the machines in which we can play video games (personal computers or video game consoles), other technological media like DVD Players or television sets and video game discs. In his or her desire to know the meaning that such artefacts could have had to the society that made them, he or she should adopt a holistic perspective to analyze it, combining this procedure with the search of written sources and bibliographical references relevant to the object. This is the canonical method of Archaeology to study the recurrent material culture that usually appears in archaeological sites, either prehistoric or historical. However, a basic difference in this imaginary situation of studying video games as material culture would be that they would have to arrange a new kind of experimental archaeology: play them!

This new perspective of dealing with material culture, that expands the case studies of Archaeology, is not original and is understandable within a new branch of the discipline, Contemporary Archaeology. This field of study treats, among other issues, the historical repression of minorities and armed conflicts of the Contemporary Past (Epperson 1999; González-Ruibal 2007, 2008; Jarman 1996); furthermore, there is a cross-discipline within Contemporary Archaeology known as Material Culture Studies that is also concerned with the meaning that our everyday stuff demonstrate. Reid, Schiffer and Rathje (1974: 126) already forecasted that Archaeology was going to broaden its work topics, suggesting that we could apply the method and theory of Archaeology to our modern and industrial world and society with the positive purpose of extracting universal explanations about human behaviour. They summarized their theoretical proposal in three main points:

> *(1)Archaeology need not be limited to the study of past cultural systems (2) As a branch of anthropology and as a member of the larger social sciences, archaeology may indeed contribute to the analysis and explanation of modern cultural behaviour (3) Archaeology as a unique discipline need not disappear with the last excavated prehistoric site. Archaeology can build on its core of method and theory to study material culture and its behavioural correlates in any cultural setting.*

Thus, mass material culture appears now as an empirical reality to archaeologists and anthropologists (*cfr.* Miller 1987), an aspect manifested in the numerous monographs and journal papers published in the recent years from the Processualist perspective as well as the Post-Processualist perspective. Processual Archaeology´s most notorious and famous researches concerning this topic are the studies of Schiffer (1991, 1994) about the social and ideological significance of the electric car and the portable radio to the American life of the Twentieth century, and the projects of Rathje (1974; Rathje & Murphy 1992) on the importance of garbage to understand modern human behaviour and environmental aspects such as biodegradation. However, Post-processual Archaeology has worked in a more productive way on this topic, perhaps with a decrease in quality, analyzing artefacts and social processes like soft drinks (Miller 1997); Internet (Miller & Slater 2000); home furniture and decoration (Clarke 2001); Vietnam Zippos (Walters 1997); windsurf (Dant 1998); fridges and freezers (Shove & Southerton 2000); new technologies (Lehtonen 2003); or the cosmetics that Japanese people use to whiten their skin (Ashikari 2005).

Such studies have a strong sociological orientation, and many sociologists work in them with anthropologists and archaeologists. Together, they have started to decipher the historical, ideological, social, emotional and environmental meaning of this kind of material culture that was not at all clear before. In this way, Material Culture Studies have opened new windows through which to observe and to comprehend, by means of its palpable and empirical materiality, the behaviour of the Post-Industrial and Post-Modern human beings. I feel obligated to ask: why can we not use this method with video games?

As an undeniable part of contemporary material culture, video games have their own history, dating back to more than forty years ago, and have become a particular narrative audiovisual medium that possesses a special trait of identity: a creative and inventive interactivity between a subject [the player], and a virtual universe [the video game] (*cfr.* Gee 2005); historical contexts or philosophical, social and emotional worries are expressed consciously or unconsciously through this interactivity, apart from simulating sports and other activities such as playing music, driving or flying. This fact has prompted the distinguished awareness of the academic sphere (Sociology, Psychology, Anthropology, Arts or Literature among others), culminating in a new cross-disciplinary branch of research known as Game Studies (Boellstorff 2006; Steinkuehler 2006; Turner 2006; Williams 2006; Wolf 2006). Likewise, a number of journals concerning this new field of science have appeared, such as *Games and Culture* or *Game Studies*.

In this manner, Psychology has contributed to the extinction of the traditional stigmatized vision about video games, understanding, after their analysis, that they are not damaging the education of kids and teenagers, and that they even are beneficial in various cognitive aspects such as the development of intelligence, memory, imagination and creativity (Estallo 1995). Nowadays, video games have lost their image of a socially restricted plaything for very young people, to arise as a cultural passion for all ages that finds its place in the mind and behaviour of Johan Huizinga´s (2007 [1954]) *Homo ludens*.

As a product of History, and understanding them as part of the contemporary material culture, video games saw the light of their plugged existence in 1958 when William Higinbotham, an American physician, used an oscilloscope from the National Brookhaven Laboratory where he worked to create *Tennis for Two*, a simple game that consisted of an horizontal line representing the game field and a vertical line representing the net. Players only had to choose the side of the playfield

where they wanted to start playing and try to hit the ball when it was coming back. Technically, this game was not a video game because it was not run in a computer and did not show true interactivity, but it is traditionally mentioned as the first video game of History, although it never became commercialized. Before *Tennis for Two* it is common to talk about video game prehistory, with clear precedents like pinball games and other electromechanical entertainment devices.

The first real video game, in other words one that was run in a computer and showed true interactivity, was *Space War* created by MIT student Steve Russel in 1961. In *Space War*, two players had to handle a space ship and battle to destroy each other, trying to keep away from the gravitational force of a nearby star and avoiding a probable fall; also they could use hyperspace speed to elude the projectiles. *Space War* was the first video game to be involved in the economic cycle because an arcade version called *Computer Space* started to be placed in pizzerias and other similar businesses. On the other hand, the first domestic video game was *Pong!* (Figure 1), an enormously simple representation of a tennis match (*cfr.* Kent 2001 to read more about video games history).

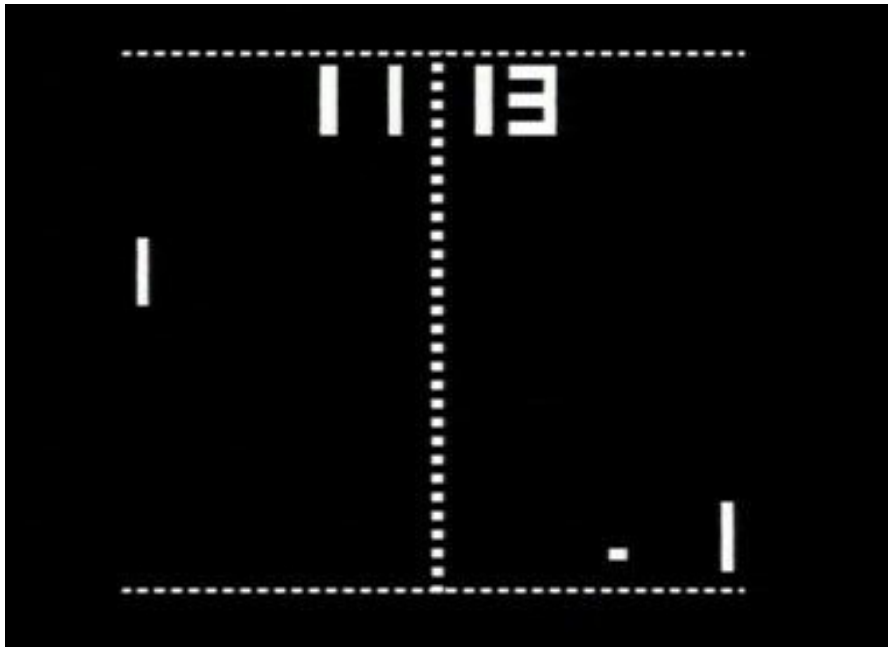

Figure 1. *Pong! The first video game that invaded every household.*

We should stop here for a while due to the fact that I think that a great part of the meaning of video games as material culture lies

on his early years. Thus, we should follow the Schifferian concept of criptohistory (Schiffer 1991), a term used by this author to refer to the hidden historical significance embodied in material culture which archaeologists are sometimes unable to decipher. In this sense, I would like to postulate that the historical background of the Cold War (1945-1991) exerted certain influence in the emergence of video games as a cultural reality. It seems conspicuous that video games (both the early and the latest) always display a confrontation between two well distinguished parts: one human player against the artificial intelligence of the machine (the CPU), or one human player against another, like we saw in *Tennis for Two* and *Space War*.

Nonetheless, it was with the progressive development of the storyline, characters and symbolic concepts of video games when this evidence became much clearer. In this regard, an essential aspect of a video game plot is to introduce the player to one or various main characters controlled by him, immersing them in a confrontation against a diehard foe, which may be characterized by one or various characters, an alliance, a national state, the inhabitants of a far planet, the members of another civilization, or by a particular group or faction. Two conceptions of the video game cosmos are opposed to each other and only one of them can obtain victory, establishing its own political, social and economic control. This is what we see in several video game sagas such as *Mario Bros*, where two picturesque plumbers face the tyrannical Bowser; the various videogames of *Sonic*, a blue hedgehog that must fight against the wicked plans of a mad scientist who wants to turn animals into machines; the *Resident Evil* saga, where the characters controlled by the player have an apocalyptical battle against fictional pharmaceutical companies to save humankind from extinction, because in the pharmaceutical industry´s secret agenda there is a scheme to experiment with living organisms aiming to create mass biological weapons; or in *Space Invaders*, one of the classic video games, in which we have to defend the Earth from an alien invasion.

We could call these phenomena "The Never-Ending Rivalry of Video games", a power game so Manichean that resembles the historical state of affairs that the liberal world led by the United States of America and its communist counterpart led by the Union of Soviet Socialist Republics held during forty six years. I do not mean to suggest that video games represent the interest of the western and liberal power to defeat its ideological opponents, but the constant atmosphere of a potential military confrontation between these two powers, which took place during the Cold War years, left an abstract and historical print in

the birth and subsequent development of this material culture. This is an aspect still visible in many of the current video games.

However, it was almost exclusively in the West World where arcade centres were created and home video game consoles were sold, becoming the most popular attraction for kids that were going with their parents to shopping malls and in a great demand for Christmas or birthday presents. This fact unavoidably put video games into people´s social life and mass popular culture. Atari 2600, Nintendo Entertainment System, Spectrum, Sega Master System, Amstrad, Game Boy, Super Nintendo, Amiga or Mega Drive have been some of the most famous video game consoles and computers, while *Pac-Man, Donkey Kong, Mario Bros, Sonic* or *Street Fighter* represent video games whose characters became cultural icons of an historical period, the 80´s and 90´s of the Twentieth Century.

These first video game consoles and computers generated simple and repetitive graphics and music from diskettes, audiotapes and cartridges; nowadays, however, we can play video games run on powerful hardware such as Xbox 360, Playstation 3 or personal computers. These read the artistic data contained in DVD or Blue Ray discs to perform genuine virtual universes full of characters, plots and cinematic sequences, whose artistic beauty and orchestral soundtracks absorb the player. The list of video game genres is extensive and varied: sports, action, adventure, strategy, role playing game, music, fight and simulation among others; likewise, genres can be mixed, producing the so-called subgenres, for instance, survival horror or terror adventure. In accordance with this great variety of genres I should mention that the melodramatic and narrative sense of video games is not the same in all of them, being more obvious in those with a long and elaborated story.

I will give only a selected relation of video games that I consider high-quality examples of artistic and conceptual works, but I should declare that every single piece of existing hardware and software related to video games constitutes contemporary material culture, because following the Schifferian concept they contain a crypto-history in their material existence. On the other hand, the amount of video games available is so vast that it would be absurd to consider a holistic overview in this paper, which has specific purposes.

For instance, the *Call of Duty* saga from Activision, is a series of action video games that recreate with absolute faithfulness a great part of the Twentieth and Twenty First Centuries wars, sometimes in

a non-fictional mode, like those that deal with the Second World War, and sometimes with a trustworthy approach, like those that represent a fictional version of the Cold War or Iraq War (*Call of Duty: Black Ops* and *Call of Duty: Modern Warfare* respectively). In these video games, we can be virtual witnesses of the terror that warfare represents to Humanity.

In the *Silent Hill* saga from Konami Japanese Company, a series of video games belonging to the survival horror subgenre, the player must confront the most disturbing and bothering feelings of human mind. Thus, we always find, in every part of the saga, an emotionally distressed character who must survive in the streets of this sinister and macabre town, where countless monsters, demons, psychos and all kinds of nightmare creatures want to kill him or her. The town of Silent Hill is understood as a symbolic representation of human guilt and remorse, home of some minds tormented by something they did in the past (for instance, the murder of a close relative or the death of a beloved person which they feel responsible for). In its places, buildings and avenues we have to face our deepest fears with every moral consequence.

Finally, *Shadow of the Colossus* developed by Sony Computer Entertainment and designed by Fumito Ueda, which obtained the applause of the critics as one of the most innovative works in the history of video games, makes us think about a classic philosophical question: is the end really justifying the means? In this video game we control a young man, Wander, who by chance finds a dying girl named Mono. After he arrives at an ancient temple, a spiritual voice tells Wander that if he wants to save Mono's soul he has to defeat and kill the sixteen giants (or colossi) that live in different areas of the Forbidden Land. Once Wander agrees to the terms of the mission, we have to seek and destroy the sixteen colossi, at first not aggressive beings, who are not responsible for Mono´s bad health condition. The only fault of the colossi is that they exist. We have to carry out a morally questionable sacrifice to rescue Mono, a person who Wander had not seen before, from the hands of death. This conceptual video game contains a constant dramatic sense because, beside the fact that Wander has the only company of his horse Agro in the adventure (there are not any other inhabitants in the Forbidden Land except the colossi), which increases the reflections about our acts, we sometimes find ourselves feeling a deep pity each time we have to kill an innocent colossus.

In sum, I think that these final three examples (which represent a derisory percentage of the available video games and their artistic and narrative quality) and all the information previously exposed constitute an excellent empirical lure to examine video games as a constituent part of the contemporary material culture. As such, they are meaningful to the history and behaviour of humankind and, in the same manner as other popular mass culture phenomena, they deserve the scientific interest of Archaeology, the discipline which traditionally studies material culture.

Retrospectives: many mistakes, scarce accuracy

Before we proceed to analyze the image of Archaeology and Prehistory that video games have spread throughout our society, I have to give some explanations about the video games I have selected to analyze. History has been an unquestionable source of inspiration in the creation of video games. In this regard, there are video game sagas such as *God of War* in which a Spartan general called Kratos should confront Olympian Gods; *Medal of Honor*, set in the Second World War; or *Gun* and the two parts of the Red Dead saga which are historically located in the United States of America´s Wild West. Likewise, there are other video games in which some archaeologists appear as characters, such as *The Dig* or *Dead Space*, examples of the science fiction issue of Exo-Archaeology (*cfr.* Walsh 2002 to know more about this lucubration). I am not going to analyze any of the video game adaptations of the adventures of Indiana Jones, the anti-archaeologists par excellence, because I consider that this popular icon has been object of many of the studies about the popular image of Archaeology (*Vide Supra*. Hernández-Descalzo 1997).

We also know that Archaeology is based on the material culture of these ages to obtain additional data not found in historical written sources. Because of the specific purpose of this paper, I am only going to focus on those video games whose characters represent some sort of archaeologist. Likewise, I am only going to examine those original video games that exhibit a prehistoric context on which its recreational offer is settled, avoiding other fictional characters which also have video game adaptations, such as The Flintstones. Concerning our selective filter, I have to admit the amount of video games chosen is a bit low, but not their qualitative value.

First, I have to emphasize *Tomb Raider* saga, a series of action/adventure video games developed first by Core Design Company to video game console and computer in 1996 and later by Square Enix

Company. The title of the video game already discloses the image of Archaeology that we find in it, starring Lara Croft, a character introduced to us as an English archaeologist. In every title of the *Tomb Raider* saga we have to control this female *alter ego* of Indiana Jones, who is fully armed with guns and weapons, to find various treasures and objects related with real ancient cultures and/or civilizations, such as the Inca Empire, the Classical Antiquity triumvirate (ancient Egypt, Greece and Rome), ancient China, ancient India or ancient Cambodia, or fictional cultures such as Atlantis, confronting villains, colossal animals, armed enemies or supernatural forces (figure 2). We never see her digging up an archaeological site from dawn to dusk, measuring an archaeological trial pit or analysing the artefacts that she finds, being far from spreading the results of her "research"; but we can jump and shoot to face the dark secrets that the mysterious artefacts hide!

Figure 2. *Lara Croft exercising her archaeological profession: in front of the sphinx of Gizeh, confronting a giant crocodile and in a temple of Southeast Asia. Notice the obvious graphic evolution from 1996 (top left) to 2008 (below).*

Broken Sword, a graphic adventure series created by Charles Cecil for Revolution Software, is a quite similar case to Tomb Raider. In

the *Broken Sword* saga not even the main character, George Stobbart, is introduced to us as an archaeologist but as a Californian tourist who gets implicated in a puzzling plot to unravel mysteries connected with the Templar Knights or the Mayan Culture. In the same manner of Lara Croft, but unarmed, George Stobbart will find gloomy enemies who are trying to obtain the enormous power that certain archaeological artefacts concede.

Eternal Darkness: Sanity´s Requiem, a Lovecraft-style survival horror created exclusively by Silicon Knights for Nintendo Game Cube video console, is slightly different. The plot is about how Alexandra Roivas tries to solve the intriguing murder of her grandfather. After discovering an arcane book, The Book of Eternal Darkness, she will get immersed in a time journey with stops at stations such as the Persian Empire, Ancient Rome, the Middle Age or the British colonies of the Eighteenth Century in America, to discover the conspiracy of archaic and malicious deities who again desire to establish their terror command around the world. The principal storyline still focuses on an ancient object that holds a supernatural power. However, there is something different in this video game, because we can play as an archaeologist loaded with his work tools; during one stage of the video game we control Edwin Linsdey, who is contracted by a patron to travel to Cambodia to find a relic in an old temple. Indeed, the so called aura of mystery is not very different to the one seen in the previously mentioned video games, but in this example the character Edwin Livingstone holds a brush that he uses to remove the dust from the walls of the temple and read the inscriptions in a clearer way. This example is the most similar parallel to true archaeology that we have found in a famous video game.

As we have seen, the image that video games have spread about archaeological science is alike to the one broadcasted by other narrative audiovisual media from the mass popular culture, like cinema or television: an old-fashioned and idealised vision picturing the archaeologist as a treasure raider that gets involved in an epic adventure to decipher the secrets of past civilizations embodied in artefacts. This image, popularized by Indiana Jones, meets the detective nature that some archaeologists from the Nineteenth Century or early years of Twentieth Century, like Heinrich Schliemann or Howard Carter, wanted to present as typical of Archaeology. In these video games, as we can see in various films or books, we encounter the Artefact/Context Opposition. By means of this dual opposition the archaeological object by itself acquires more informative value than the whole archaeological site;

this could be the most erroneous idea ever spread about Archaeology. This opposition is manifested symbolically in the supernatural qualities and power that the artefact exhibits, becoming the main inorganic protagonist of the past. The people who make the object, as well as the techniques utilized to manufacture it or the source of the raw materials that it is made of, are not mentioned. All by itself the object explains the past; a misty and strange past that causes to all of us a primitive fearful enthusiasm. I wish that the past and Archaeology could be so stimulating, but the fact is that this image is an absolutely untrue vision of Archaeology: this image is to Archaeology what *The X Files* series is to Science.

The image of Prehistory that we find in video games is not very different, in its absence of rigor, to that seen of Archaeology. In this regard, those video games set in the Prehistoric Age commit the classical mistake, in the style of films like *One Million Years B. C.*, of placing our ancestors in a world full of dinosaurs. We can observe this unscientific aspect in *Chuck Rock* and his sequels, a work from Core Design launched in 1991 to home video consoles, and in the arcade machine *Prehistoric Isle in 1930*.

Figure 3. *Some screenshots from Joe and Mac: Caveman Ninja: the kidnapping of the women of the group by hairy and rough hominids (top left); Joe saving a woman from the jaws of a Tyrannosaurus rex (top right); Joe expiring because he has not fed himself (below).*

We can witness this chronological error in the Data East work *Joe and Mac: Caveman Ninja*, a video game originally developed as an arcade machine that afterwards got its domestic versions made.

The storyline of the video game also shows what nowadays would be considered to be a sexist view. Thus, in the introductory sequence of the plot, we can watch how some less evolved bipedal hominids (more hairy and with a rougher appearance) sneak in at night in the *Homo sapiens sapiens* main characters' village and kidnap the women of the tribe, taking them out of the huts while dragging them by the hair. The mission of the heroes, Joe and Mac, is to rescue the helpless women, making use of weapons such as stone hand-axes and wheels, bones or fire; with all these weapons they have to defeat the kidnappers who keep an anachronistic and unnatural alliance with dinosaurs as well as with other enormous living beings such as carnivore plants (figure 3). At the end of each stage, and after they have beaten the final boss, a rescued woman kisses one of the two timid characters who consequently blushes.

Aside from this vision of Prehistory full of interpretive mistakes, there is one aspect that deserves our special attention, because I consider it a good reflection about prehistoric life. In this respect, throughout the video game we can observe how the life-bar of Joe and Mac is continuously decreasing unless they ingest some of the food (vegetables, fruits or meat) that appear when an enemy is killed; if we do not feed Joe and Mac they lose one of their three lives, patting their bellies and crying out some suggestive words: *I'm hungry!* This virtual evidence implies that the video game takes into account in a very correct manner the importance that subsistence activities had in the Prehistoric Age, when the survival of the individual and his social group or band was closely related to the nutritional resources they could obtain, an omnipresent aspect in the monographs concerning the most classic prehistoric sites (*e.g.* Binford 1981; Domínguez-Rodrigo Barba & Egeland 2007; Potts 1988).

This aspect of subsistence also appears in the first part of the *Wonder Boy* saga, a video game developed by Escape in 1986 as an arcade machine. In this work, a blonde, blue-eyed troglodyte boy, named Tom-Tom, must rescue his girlfriend, Tanya, who has been kidnapped by a monster. To accomplish his mission, he has a stone hand-axe to kill his enemies (various kinds of animals and other creatures). In the same way we saw in *Joe and Mac: Caveman Ninja*, the life-bar of Tom-Tom decreases continuously unless we eat some of the vegetables or fruits (there is no meat in this videogame) that we can find dispersed along each stage. If we do not feed Tom-Tom, a sententious phrase appears in the screen when he dies: *no vitality!*

If we forget the incoherent appearance of dinosaurs, and focus on how *Joe and Mac: Caveman Ninja*, and *Wonder Boy* as well, reflect the importance of subsistence in the Prehistoric Age, we can see a very reliable depiction of this important issue from the most distant past of our species. Likewise, both video games show, in a very appropriate manner, the natural dangers that our ancestors faced in order to survive in prehistoric times, such as the struggle for resources against other organisms (other hominids and/or mammals) or the inclemency of the weather and environment (hard rain, extreme cold and heat, rough terrains).

In summary, I have to say that the image of Archaeology spread by video games is traditionally erroneous. However, in the case of Prehistory, although some classic errors are still present in recreating this part of our story as species (*i.e.* dinosaurs and humans coexist in the same chronological context), we can also find a very accurate portrait of some of the aspects of our ancestors everyday life (*i.e.* the essential issue of subsistence). There is no doubt; Joe, Mac and Tom-Tom are hunter gatherers. Thus, I think that video games on account of their typical interactivity possess a very significant potential to narrate and make people understand concepts, a trait that should be used to spread a trustworthy public image of Archaeology and Prehistory. This is something that has never been done to Archaeology and only in an anecdotal way to Prehistory, but it also is something that video game developers should consider for future projects.

Perspectives: the shape of things to come?

So, what can we expect about the image of Archaeology and Prehistory spread by video games in the years to come? To be honest, a vision not very different from the one shown in the previous epigraph, unless something change. Because of their nature of audiovisual spectacle and entertainment system, video games tend not to be realistic, with the recurrent appearance of colossal and supernatural enemies, which defy physical and biological laws as well as mythologies and fantasies. Moreover, we cannot forget that video games are commercial products, and a strictly realistic and faithful product about Archaeology and Prehistory would not generate considerable benefits. Nonetheless, the current technology of video game consoles and personal computers, combined with the possible advice from Archaeology and Prehistory specialists would make the design of completely accurate video games of these two branches of knowledge possible. Following the examples of *Joe and Mac: Caveman Ninja* and *Wonder Boy*, in which an essential

aspect of Prehistory is represented correctly, video game developers could create works in which dinosaurs are replaced by real dangers to our ancestors, like other real living beings or the search for food or fire.

The problem is that this idea lacks the commercial appeal necessary to launch a video game and, surely, would be rejected by software companies. It is very simple; education is not as important as benefits. For this reason, educational video games are usually developed by small companies without sale expectations, and their products are normally not found in video games shops but near virtual encyclopaedias and other similar products instead. Also, on account of their scarce commercial value, these video games have a very low quality compared to the ones of the great companies.

Roman Town, a video game created by Dig-It! Games, a company oriented to educational games, is one of these examples. However, *Roman Town*, presented as the premier archaeology computer game, is a real video game of Archaeology; neither monsters nor mysterious artefacts with supernatural power or armed to the teeth archaeologists appear in it… We simply find the archaeological site of a roman village, called Fossura, which we have to dig to extract every possible kind of data. An area of the archaeological site and the management of the archaeologists in it are assigned to the player, who has to choose the appropriate tool (shovel or pick) to work on the soil. When any of the archaeologists finds an object that deserves our attention, we have to carefully handle the trowel to dig it up and if, for example, the object is a roman coin an explanatory video about this type of material culture is automatically played. When we have finished investigating the designated area, we must classify the materials found in different typologies, such as bone, pottery, metal or glass; reconstruct mosaics or vessels in a likely puzzle game; and compare all the material culture found to its corresponding modern form (figure 4).

Roman Town is a video game designed exclusively for kids, with a pure educational value, although it takes a recreational form. Nevertheless, we know that not only kids need to be educated about Archaeology… It is very unlikely that a video game like Roman Town would ever be played by an adult, who looks for a better *gameplay. Gameplay* is a term used in video game jargon to define the quality of a work, from its working rules to its design. Basically, we could say that *gameplay* represents the process through which the player feels greater or less attraction to play a video game; in this sense, if a

video game has a bad or very simple *gameplay* it becomes a mediocre work, although the video game is superb in audiovisual terms. *Roman Town*, besides from having a very easy *gameplay*, without true levels of difficulty, presents poor graphic and audio features.

Figure 4. *Some of the activities that we can execute in Roman Town: digging up bones with our trowel (top left); reconstructing a vessel (top right); comparing ancient and modern objects (below) (http://dig-itgames.com/index.php/archaeology-computer-game-roman-town/).*

In short, I think that the only way to create video games that faithfully represent Archaeology and Prehistory would be a productive and creative interaction between the best video game developing companies and the academic sphere of Archaeology and Prehistory. Furthermore, with new video game console technologies, such as *Wii Motion* from Nintendo, *Move* from Playstation 3 or Kinect from Xbox 360, the interactive possibilities to make great quality video games about Archaeology or Prehistory are vast; we could dig up an archaeological site or de-flesh bones full of meat with the movements of our hands, without the need to press a button or a key. Especially for kids, this turns into a more practical knowledge, though virtually, of our most distant past and the scientific process by which we can know how it was.

Conclusion

Video games are an artistic product of Pop Culture as well as an achievement of digital technology. This cultural nature permits them to

contain social and ideological information about our current historical time, becoming a meaningful example of the Western Post-Industrial World material culture. Therefore, Archaeology, in the same way as other scientific disciplines, such as Sociology or Anthropology, can participate in the new cross-disciplinary field known as Game Studies focusing on the goal of its scientific purpose: the study of video games to unravel the role that they perform in our society and culture.

Understanding video games as information carriers, it becomes obvious that they have spread a certain image of the Archaeological Science and Prehistoric Age. In both cases, the vision is very similar to the one broadcasted by other narrative audiovisual media, like cinema or television, falling into classic errors when trying to represent the archaeological profession or the human prehistoric context. Thus, the image of archaeologists is one of an idealist and old-fashioned tomb and treasure hunter who faces the intriguing and mysterious powers contained in the past and symbolized in artefacts. In the same way, Prehistory is represented as a historical context within which our ancestors coexisted with dinosaurs. What is really surprising is that these communicative dysfunctions are the consequence of an absolutely avant-garde narrative medium, characterized by a pedagogical interactivity, which also holds an enormous social influence and attractiveness. Due to this fact, I think that a great opportunity to bring Archaeology and Prehistory closer to society is being wasted.

However, some video games (*Joe and Mac: Caveman Ninja* and *Wonder Boy*) have shown that some aspects of Prehistory, such as the importance of subsistence, can be represented in a reliable manner, although they still commit other terrible errors. At the same time, there are educational video games (*Roman Town*) that are totally faithful to the real image of archaeological work, even though their poor quality as commercial products determines the success to achieve an educational function.

On account of this duality, I think that a creative collaboration between the video game developing companies with more artistic prestige and the academic specialists in Archaeology and Prehistory would produce high quality video games, which could represent with high conceptual fidelity what Archaeology and Prehistory are for human knowledge. These potential works would spread an image of Archaeology and Prehistory that would be absorbed by the whole society through an ever-stimulating playing experience. Maybe my proposal is nothing but a naïve wish, but I hope that this paper contributes to

this possible alliance between video game developers and Archaeology and Prehistory researchers, as this is the only way to spread a correct image of these two scientific subjects.

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AP: Online Journal in Public Archaeology Volume 1 -2011 p. 93-95

POINTS OF YOU
Brazilian Archaeology and the Pronapian's feeling

Marlon BORGES PESTANA[1]

I'm glad to have this opportunity to explain contract archaeology from a Brazilian perspective. We have lots of jobs and research going on, and we also have our own scientific identity. The understanding of our past resulted by the ambiguity of choosing whom Archaeology is interesting for: communities, politicians or our scientific aristocracy? It is not about the answers, it is about making the right questions. We need to be precise at any time, at any moment, at any cost. We have to be ethical, with ourselves and with others. That is the Pronapian message. By the way, Pronapian is the group of Brazilian scientists who worked for the National Program of Archaeological Research since the first North-American archaeological campaign in Brazil (1965).

We don't know exactly what we have done yet. So, what is the right question? What makes our Archaeology different? It is a simple question, but not a simple answer. We understand that we have a 'young' background compared with other regions of the world. That is difficult to grasp when we also have one of the most impressive material cultures ever seen. But now we also have a completely new perspective. We are not a weak colony anymore. Now we know about our things, and almost all of us are thankful for the Pronapian work. So, do we have our own paradigm?

We are now understanding contract archaeology, and how to make money selling our knowledge. In this context there is no place for a hard paradigm; it has to be flexible, clear and practical. We are fighting for a socially experienced archaeological science, through which citizens, like archaeologists, have ways to bring new information to society. Archaeology has to be public. Also, a new perspective of public; in order to get it, we need to be better archaeologists. We need vision, perspective and amplitude. It is hard not to be heard, but it is

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worst not being understood. If you do the right questions maybe you get better answers. So, let's be clear.

It is difficult to understand how we can practice a good Archaeology if we do not have a pioneer perspective, an original paradigm. Well, we have one. Brazilians were privileged by the Pronapian program, which gave us a very modern and creative tactic to comprehend our past. Now we have had the opportunity to acknowledge this program, because it is ours! We cannibalized it, digested it, and now we can produce our own theory, hybrid interpretation, also original. We are proud to be receiving foreign scientists, as there are a lot of places to dig. But remember: we are not that innocent anymore. Our perspective is stronger than ever, we grew up with our own experiences and we have learnt from our own mistakes. We are thankful for all the knowledge that Europeans and North Americans brought us. But now that we have created a new compendium of terminologies, fragments, value judgments, etc., we do not feel we need them anymore. We can work together, but from an equal position.

Being a businessman in Archaeology is equal to being an academic. The difference is in the pocket. This does not mean that I want to be rich (which of course I do). It means I also wish to contribute more; bringing new people to our discipline, and creating jobs and new perspectives, including theoretical issues. At this moment Brazil has only a dozen of cultural heritage companies, less than what would be expected from a big country like ours. The number of archaeological companies is increasing, but we are still one of the last ones in publishing new ideas.

Do you know anyone who feels miserable being an archaeologist? Or any archaeologist who worries about money? We all do. Anyway, I believe that a healthy archaeological environment contributes more than a polluted one. So, let's be creative, happy and original. Some results can only be right if you enjoy what you are doing. Do not take it that seriously. Remember that Archaeology is also a state of mind, conditioning your spirit to be satisfied.

There is another topic that concerns me; public/private knowledge and archaeological research. Some things must remain public. Why? There is a river of information flowing down there, right under our feet. If our work produces scientific knowledge, it must remain public. But, if private profits are huge compared to the efforts to be public, bringing scientific results to the community is, for sure, possible.

Is it ethical to make money with public heritage? Well, I don't find it ethical, unless it has a real impact on society. This is why archaeology must remain public. Local communities have the power to change and bargain our results because, among other things, we are not prepared to see things like them. Here is my suggestion: you should try and change your feelings about public archaeology contributions. Try to start a new nonprofit project all by yourself. It is not only about giving something back; it is about how you must contribute! And grow up with experience. Be mature. Be responsible and creative.

A basic part of the Pronapian's feeling is helping others to understand archaeology for free. I'm proud to be a Pronapian, to understand and respect my roots, to give more than empty criticism and revisionism and I hope you can share these feelings.

São Leopoldo, Brazil. November 25, 2010.

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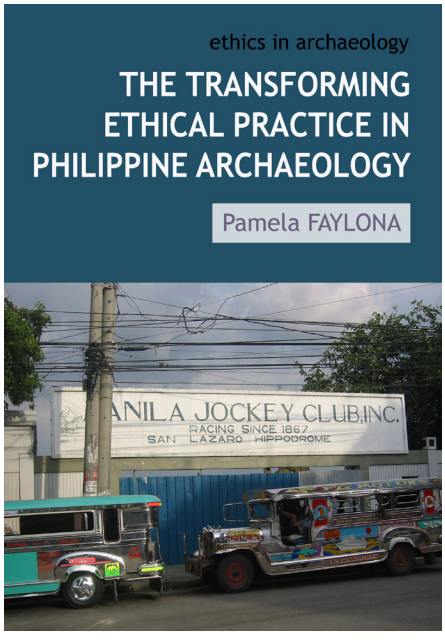
REVIEWS



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ethics in archaeology
The transforming ethical practice in Philippine archaeology

[by Pamela Faylona]

JAS Arqueología Editorial
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Summary: In this short book, Faylona describes and outlines the history of archaeology in the Philippines with specific reference to ethical practices. By reviewing archaeological publications, museum exhibitions, and popular writings about archaeology, Faylona arrives at a "periodization" of ethics in the Philippines. Taking into account these periods of ethical practice, elements of moral philosophy, and existing ethical codes from around the world, Faylona suggests future directions for Philippine archaeology, including the beginning of a discussion concerning an ethical framework based on five "valued aspects" for the practice of Philippine archaeology.

Ethics is an important and growing part of discussions, practice, and training in the field of archaeology today. Archaeologists are frequently confronting situations that require sensitive and complicated decisions, whether in the field collaborating with others, in the lab or office deciding how to treat data, in publications, in the classroom, or in interactions with colleagues, Indigenous populations, or other stakeholders. Additionally, the archaeological record is the subject of a number of modern ethical dilemmas, including the illicit trafficking of antiquities, damage to archaeological sites from development,

misrepresentation of the past in popular films, repatriation of objects in museums, and the involvement of archaeological heritages in armed conflict. These are important international issues in global archaeology today that are in need of careful and sensitive discussion and analysis.

Archaeological ethics are specific to the roles and responsibilities of those who practice archaeology. As these roles and responsibilities have changed over time, so have the ethics that give them meaning. There exist some ethical values in archaeological practice that seem to be universally-held ethics (*e.g.* stewardship of archaeological sites). However, ethics are valued and understood differently by people working and living in diverse contexts. Some archaeologists work in museums in Peru, while others work in contract-archaeology in England (or Cultural Resource Management as it is called in the United States). Undoubtedly, these archaeologists have differing opinions on the primary ethical issues facing archaeology today, not only because of their different work-contexts, but also because cultural backgrounds (among other things) influence the way personal and professional ethics are constructed and construed. Additionally, members of the public have diverse ideas about the importance and relevance of archaeological practice and archaeological resources, which affect how archaeologists conduct their work. In order to understand the ethical values and practices of archaeologists and members of the public in the world today, we must seek to understand the specific histories and contexts of those values. Only with this knowledge and understanding can we hope to have true collaboration amongst disparate stakeholders.

In the book *The Transforming Ethical Practice in Philippine Archaeology* (JAS Arqueología 2010), Pamela Faylona attempts to reach this goal of understanding the development of a culturally-situated field of practice and ethics, specifically by examining archaeology in the Philippines. Faylona defines ethics as "*the guiding principles of a group or set of morals and values that govern an individual or a society*" (p. 12). In seven short chapters, interesting insights into the colonial and modern periods of archaeology are discussed and the reader is left knowing much more about the history of archaeology in the Philippines. Extensive appendices augment the text and aid the reader in comparing the ethical frameworks of other countries. The author's content analysis data and bibliography provide the reader with additional sources of information on ethical practices in Philippine archaeology.

The Book

Why do we need to understand ethical practice in Philippine archaeology? Faylona correctly notes that, in studying ethical practice, we are "*providing clarity on how to practice the discipline in a proper or acceptable way within the community*" (pp. 1-2). In the communities of the Philippines, there are several reasons why we need to understand ethical practice of archaeology, which are in turn justifications for Faylona writing this book. The reasons Faylona discusses include: a "*growing public awareness of archaeology in the Philippines*", "*growth of the archaeological community in the country*", advances and developments in the practice of archaeology, and the occurrence of several highly public and visible ethical dilemmas in recent years in the Philippines.

Another important justification for this book is that, as of the time of publication, there are no "codes of ethics" or similar documents specific to Philippine archaeology. Similar situations can be found in many countries of the world, where the number of practicing archaeologists is small or where archaeology is a relatively new science. Thus, as Faylona notes, many archaeologists in Africa, Asia, and South America "*follow the international governing bodies on culture in conducting archaeology*," such as UNESCO or the International Council of Museums (ICOM). But, as Faylona notes and the reviewer agrees, the guidelines of these bodies may not be appropriate or justified in certain areas of the world and they do not encompass the myriad of specific dilemmas encountered in local contexts. To aid the reader who is unfamiliar with existing ethical codes and to provide a comparison of her own proposed framework for archaeological ethics, Faylona discusses and reproduces (in extensive appendices) the major codes of national and international archaeological organizations (e.g. the Society for American Archaeology, Canadian Archaeological Association, European Association of Archaeology, etc.) —a valuable contribution of the book.

To say that a local code of ethics does not exist in Philippines is not to suggest that archaeology is not practiced ethically in the Philippines. Instead, it is to say that the archaeological community has not taken the steps to initiate dialogues about what ought to be included in a code of ethics-style document. This book provides an important first step in that dialogue by taking three steps: 1) "*Distilling the ethics in Philippine archaeology*" (p. 4) through content analysis of archaeological publications, museum exhibitions, and public writings on archaeology; 2) Identifying the periods or transitions in the history

of archaeological practice in the Philippines; and 3) "*Extrapolating the valued aspects of Philippine archaeology*."

Interestingly, step 2 is accomplished first, though the phases that are created in the text could have been explained more thoroughly. The transitions (or transformations) of ethical practice in the Philippines derived by Faylona correspond to three historical periods: 1) Integration (early 1900s-1950), 2) Assimilation (1950-1980), and 3) Recognition (1980s to the present). These periods form the basis of Faylona's content analyses in chapters 3-5, which cover, respectively, the history of archaeology in the Philippines, artifact collection and display by museums, and popular archaeology writings. In chapter 3, the practices of famous anthropologists and archaeologists who worked in the Philippines during its developing phases (including Alfred Marche, Alfred Kroeber, H. Otley Beyer, Robert Fox, William Solheim II, Jesus Peralta, and F. Landa Jocano) and modern phases are discussed. In chapter 4, the processes of acquisition, documentation, and presentation of prehistoric and historic archaeological materials at major museums in the Philippines are presented. Finally, in chapter 5, "popular archaeology" (defined as archaeology "*carried out by non-archaeologists, usually through writing*" (p. 49)) is analyzed in order to define what the public views and what the public emphasizes as ethical practices in Philippine archaeology. To the reviewer, this was the most interesting of the content analysis chapters as it provided the most examples of ethical dilemmas and how they were perceived, addressed, and resolved.

In each of these chapters, ethical values are not as much described in detail but are instead meant to be inferred from theoretical and methodological practices. The theories, methods, and values described mirror many of those during the respective time periods in the United States and other areas of the world, which is not surprising as many of the archaeologists working in the Philippines during the Integration and Assimilation periods were foreigners. As in the U.S., early archaeologists and the public in the Philippines were first concerned with collecting "museum-quality" objects and basic culture-history questions concerning the occupation of the Philippines and the social organizations of past peoples there. Over time, the methods of archaeologists and museums were standardized in the Philippines, and the profession of archaeology was defined within both Filipino university and government contexts. Additionally, cultural property laws were implemented by the Filipino government to protect artifacts and sites at a time when context was

of growing importance to archaeologists and the illicit antiquities trade was growing in prominence world-wide. New sub-fields of archaeology in the Philippines, such as underwater archaeology, and the creation of new national institutions led to new responsibilities for archaeologists, such as collaboration and information sharing.

In chapters 6, Faylona extrapolates the ethics of Philippine archaeology by creating five "*valued aspects*" that "*permeate the archaeological community in the Philippines*" (p. 76): "*(1) the practice of the Archaeologists; (2) treatment of an Artifact; (3) treatment of an Archaeological Site; (4) intentions of an Archaeological Institution and public presentation of archaeology; and (5) the Audience or how the archaeological community portrays the archaeology [sic]—and their ethics—to the public*" (p. 63). In this chapter, Faylona defines each of these valued aspects and compiles evidence from the content analyses of the previous three chapters that relates to each aspect.

In the final chapter, Faylona proposes ethical guidelines for the practice of Philippine archaeology, organized by the five valued aspects. She notes, though, that ethics are dynamic and that any code should "*reflect the context, or milieu of the Filipino archaeology*," and thus the community of archaeologists in the Philippines should debate her guidelines and continuously reflect upon the ethics of their practice. This is a commendable and important point that is currently being dealt with by numerous international anthropology and archaeology organizations, who are struggling to "update" their ethical codes. Faylona's guidelines are a list of "should" statements many of which will not be challenged by archaeologists or heritage professionals. For example, "*An archaeologist should have an educational background and obtain formal training in archaeology*" (p. 78). Others are slightly more controversial and are based on the author's content analysis and, undoubtedly, her opinion, such as: "*All artifacts that are purchased and collected should not be displayed inside museums to prevent looting of artifacts*," (p. 79) or "*All archaeological sites should be explored and excavated by professionals and experts alone*" (p. 80). This observation is not meant as a critique, but instead as praise, for ethical codes and standards of ethical behavior should be contested and incite discussion. Faylona succeeds in her goal of creating a framework that will initiate an endeavor in archaeological ethics "*that the whole community and all its stakeholders can undertake together*" (p. 4).

Conclusion

Overall, this book is successful in its attempt to understand the development of culturally-situated ethical values and issues in Philippine archaeology. There are a few minor critiques about the book that should be mentioned, including the exclusion of two major sources of information in the content analysis: interviews with Filipino archaeologists and case-studies of ethical dilemmas faced by Filipino archaeologists. The author justifies not posing questions to Filipino archaeologists such as "*What is ethics in Philippine archaeology?*" because "*ethics in Philippine archaeology is yet to be articulated. Thus, it will be difficult for the respondents and researcher to discuss this topic*" (p. 7). However, the content analysis the author performed demonstrates that ethical practices do exist and that there are differences in opinion over the importance and implementation of these practices. Ethics is best understood, in the reviewer's opinion, through dialogue. Longer case-studies of ethical dilemmas faced by Filipino archaeologists are missed in the book because case-studies are usually relatable and would have provided the reader who is unfamiliar with Philippine archaeology with additional contextual information and a resource to use in classrooms or public discussions about ethics. An additional critique is that some of the professional codes discussed in the text are out-of-date, such as that of the Society of Professional Archaeologists (SOPA) (which became the Register of Professional Archaeologists (RPA) in 1998) and others are missing entirely, such as the codes of the only truly global archaeological organization, the World Archaeological Congress (WAC). Finally, the topic of archaeologists' interactions with and responsibilities to Indigenous people is discussed surprisingly little in both the author's content analysis and ethical guidelines, and the literature reviewed in chapter 2. Indigenous rights (and related topics such as repatriation) have been major themes in archaeological ethics across the globe over the last 20 or more years and undoubtedly there are ethical issues related to Indigenous peoples in Philippine archaeology today.

In this book, Faylona states that applying ethics to a discipline is "*tantamount to affirming the discipline's integrity as well as strengthening the foundations for its practice*" (p. 13). In analyzing and discussing the history of archaeological practice and modern dilemmas in the Philippines, Faylona has strengthened our understanding of archaeology in the Philippines and revealed ethical principles and values which lay at the foundation of its practice. Importantly, within her analyses of the practices of past archaeologists and museum personnel, Faylona does

not pronounce judgment or lay blame on past practitioners for the modern situation. Instead, she "*examine[s] the historical facts, and eventually interpret[s] their meaning and significance in accordance to the values of the discipline*" (p. 9). In doing so, and in proposing ethical guidelines for archaeological practice, Faylona has made a commendable contribution to the literature on archaeological ethics and Philippine archaeology.

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