June 2013

Issue 30

THE POST HOLE

Empowering voices from fragile states

Capitalism, chaos and our postmodern society Big kids: Are different methods needed to present heritage to adults and children?

> ISSN 2052-0778 (Print) ISSN 2051-9745 (Online)

Acknowledgements

The Post Hole is grateful to the University of York's Department of Archaeology for essential financial and collaborative support, which has greatly assisted the running and growth of the student-run archaeology journal since its establishment in 2008.



The Post Hole is also grateful to Heritage Technology for professionally redeveloping its website in 2012, and continuing to provide technical support since then.

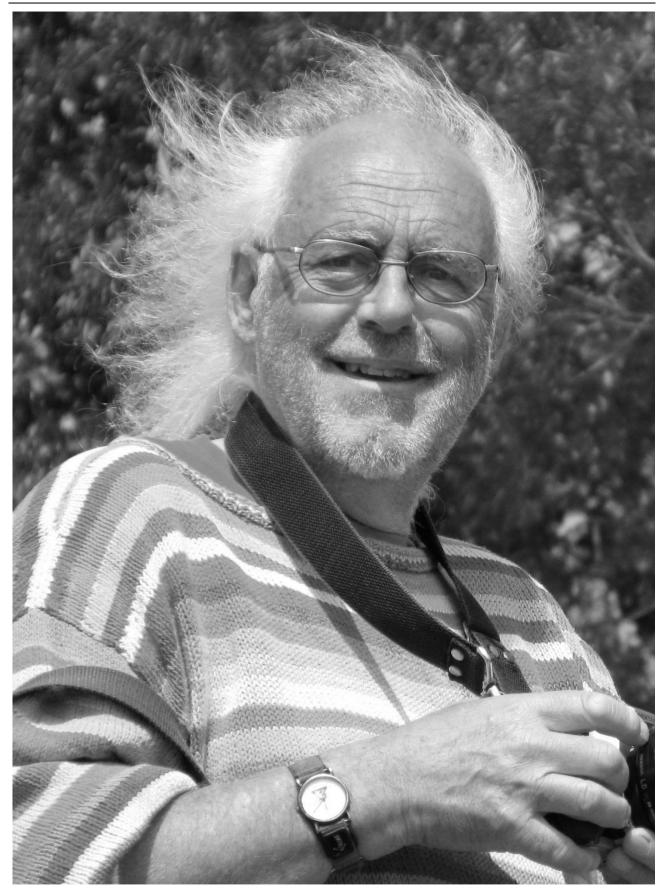


Finally, *The Post Hole* wishes to thank University of York students Taryk Rawlins-Welburn and Laura Harker for their superb design of the front and back covers of this issue.

Hard copies of The Post Hole are printed by University of York uniprint (http://goo.gl/EHjiK)



Front cover: Ruins of The Great House, Bunce Slave Fort, Sierra Leone (Image Copyright: Andrew Marriott)



Professor Mick Aston, 1946-2013 (Reproduced and modified with kind permission of Emma Watts-Plumpkin)

A special feature available at theposthole.org paying tribute to this inspirational archaeologist is due out in July 2013

Editorial Team

Editor-in-Chief

David Altoft david.altoft@theposthole.org Managing Editor Taryk Rawlins-Welburn taryk.rawlinswelburn@theposthole.org

Submissions Editor

Alison Tuffnell submissions@theposthole.org Editor Tristan Henser-Brownhill editor@theposthole.org

Public Relations Officers

Robynne Eller publicity@theposthole.org

Emily Taylor publicity@theposthole.org

Public Relations Coordinators

Cambridge: Alex Loktionov alex.loktionov@theposthole.org Durham: Alistair Galt alistair.galt@theposthole.org

Nottingham: Annabell Zander annabell.zander@theposthole.org Reading: Katie Townsend katie.townsend@theposthole.org

Southampton: Gemma Smith gemma.smith@theposthole.org

Contents of Issue 30

Editorial: Celebrating 30 issues of The Post Hole, David Altoft	
Empowering voices from fragile states, Andrew Marriott7	
Capitalism, chaos and our postmodern society, Paul Joseph De Mola	
Big kids: Are different methods needed to present heritage to adults and children?, Andrew Henderson-Schwartz	
Archaeology under the microscope, Lisa-Marie Shillito	
Celebrating 150 years of promoting the study of Yorkshire's past, Kirsty McHugh	

ubmissions information

Editorial: Celebrating 30 issues of The Post Hole

Welcome to what I hope will be a fascinating issue of *The Post Hole*! However, it is not just another issue, it is the 30th issue! Since it was established in 2008, *The Post Hole* has given students, academics and anyone else with an interest in the past the opportunity to share and discuss their work and views with one another. It is this benefit that *The Post Hole* aims to offer to as many people as possible, regardless of background or location.

I am delighted with the success that this truly unique journal has had in achieving the aforementioned aim. *The Post Hole* always aims to provide a reputable platform for the dissemination of research and activities of people, whilst ensuring that that platform is highly accessible through its engaging content and methods of delivery. With such excellent contributions from all our authors, the editorial team rarely has to worry about the accessibility of the tone of *The Post Hole*; instead, we have been working hard to constantly innovate the ways in which *The Post Hole* reaches out to large audiences in the student, academic, commercial and public communities of archaeology.

To coincide with and celebrate this 30th issue of *The Post Hole*, our first **podcast** will be available from www.theposthole.org next week. I would highly recommend that you listen to it once it is available because I will use it on this occasion to outline the achievements of *The Post Hole* and explain in much clearer terms the ways in which the journal can and does benefit our diverse audience of readers and writers. Be warned though, I may also use our inaugural podcast to tempt you to write about your own research or views on the past and share it with *The Post Hole*!

I am sad that my two years with *The Post Hole* will be coming to an end this summer with the release of Issue 31, and that I will only be able to enjoy writing one more editorial and editing one more set of submissions. No other publication of its kind, dare I say in the world, has offered such a large and diverse audience of people to read and publish about the past. Whilst you are reading this issue I hope you will consider joining the people who have taken one of our first 30 offers of publication by writing for Issue 31 next month. In short, it doesn't matter who you are, it only matters that you have something relating to archaeology that you would like to share with a large audience of people (in fewer than 2,500 words!).

I will be sad to no longer be involved with this exciting endeavour, but I know I will also be keen to continue following how it unfolds. You will be able to do the same thanks to our brand-new bi-monthly **newsletters**! These will be released with and between each new issue of *The Post Hole* and will keep you updated on the latest exciting developments and ways in which you can get involved with the journal. To receive these newsletters, simply enter your name and email address at www.theposthole.org/newsletter.

In this issue, **Andrew Marriott** provides a thought-provoking recount of his visit to the remains of Bunce Island slave fort in Sierra Leone to ask who archaeology is for. Following the views of Gemma Smith on archaeologists and propaganda in Issue 27, Marriott argues that this culturally significant site is not being used by archaeologists and conservators to its considerable potential to enable local empowerment and post-conflict reconstruction.

Paul Joseph de Mola critiques the subjectivity of postmodernist theory in archaeology and calls for a retracing in archaeologists' expectations for unlocking 'true' interpretations of the past. de Mola uses interesting examples to justify his argument, including one of a museum exhibit on human occupation of an Arizonan desert environment where any sense of temporality or cultural distinction of the artefacts on display is arguably lost in their postmodern-influenced layout.

Andrew Henderson-Schwartz also looks at the interaction of museums and archaeology. Henderson-Schwartz considers the methods used by museums to portray the past to adult and children visitors to be very similar and highlights a number of important questions that need to be more vigorously assessed by the heritage sector to ensure that both groups of people benefit in equal measure from visiting museums.

Lisa-Marie Shillito informs us of the new microscope laboratory that has been established for the University of York BioArCh (collaborative Biology, Archaeology and Chemistry) group. Shillito, who specialises in microstratigraphy and bioarchaeological research, convincingly explains why university facilities like the new microscope laboratory in York are essential for student learning and development of experience from integrated teaching and opportunities for involvement in original research.

Finally, **Kirsty McHugh**, archivist for the Yorkshire Archaeological Society, shares with us the wonderful success that her Society has had over the last 150 years in drawing together people from all walks of life to protect and appreciate local heritage. This highlights the over-riding theme of the articles in this issue that the past can only survive and flourish into the future if popular and inclusive forms of engagement can bind people together, and perhaps as Marriott suggests, this is also how archaeology, no matter how many financial, theoretical and practical constraints it may face, can bind people together for the future.

Although it may seem rather naive of me to suggest this, I hope that *The Post Hole* can contribute in a small way towards the potential archaeology can have for benefitting society in the future. If you agree with this sentiment and would like to share your work or views with us, please email **submissions@theposthole.org**!

Best wishes,

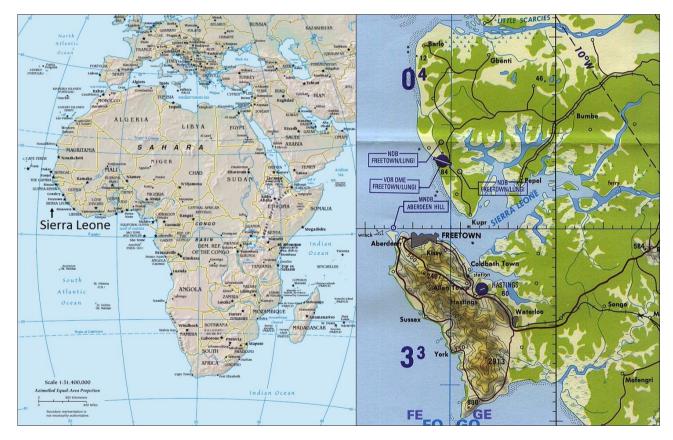
David Altoft

(Editor-in-Chief of The Post Hole - david.altoft@theposthole.org)

Empowering voices from fragile states

Andrew Marriott¹ ¹Department of Archaeology, University of York, The King's Manor, York, YO1 7EP Email: agm505@york.ac.uk

Sierra Leone (Figure 1), 22nd May 2003. Torrential rain all night which finally eased off around 10am. We were up at six and, after a quick breakfast, packed our shelters into the back of the Land Rovers to continue a check of Sierra Leonean Army positions along the border with Liberia. There had been some activity around us during the night, while across the Mano River Liberia was in the depths of its own civil war. After a morning's work on the forward positions we headed south to the coast and a remote platoon base at Mano-Kpende (Figure 2).



Figures 1 and 2 (L-R): Sierra Leone on the West African coast; Bunce Island 20 miles up the Sierra Leone estuary (Reproduced and modified with kind permission of the University of Texas Libraries)

I saw the cannon lying in the sand as we drove through a small clearing just short of Mano-Kpende (Figure 3). Some surprisingly ancient weaponry remains in service in the world's trouble spots, but this was clearly a relic of a bygone era. I made a note to have a closer look later in the day.



Figure 3: The Mano-Kpende cannon (Image Copyright: Andrew Marriott)

Back then, I wasn't an archaeologist, but a military career regularly presents encounters with the past. Many are simply curious while others can present some cultural and ethical challenges. Amongst the four of us there was plenty of military speculation concerning how and why this piece had fetched up perhaps half a mile inland from the strategically important site where the wide and fast-flowing Mano enters the Atlantic Ocean. The best estimations were of early 18th century date and possibly of British or Portuguese origin. Was it a survivor of a shipwreck or did it mark part of a fortified settlement now lost to the tropical forest? Of course, to the archaeologist these are just commonplace conjectures stimulated by artefacts as we try to understand a lost past.

But there was a problem. What do you do with something like that in a country still coming out of a state of civil war? What institutions exist to deal with archaeology and do they have the capacity to manage something two full day's drive from the capital, Freetown? And what risks arise from drawing attention to an artefact and site of potential value in a country ranked almost at the bottom of the United Nation's Human Development Index and where most people exist on less than US\$1.25 per day (anon. 2011)?

While considering this problem, my mind was drawn to a more contemporary issue. In North-East Sierra Leone I had recently visited a building in the town of Kailahun, known locally as the 'Killing House' (Figure 4). Kailahun had been a rebel stronghold in the civil war. Amongst the damaged and abandoned houses on one road was an unprepossessing concrete structure of three or four rooms. The house had been used as an interrogation and execution centre and the locals asserted that the dark stains on the walls were from the blood of its many victims.

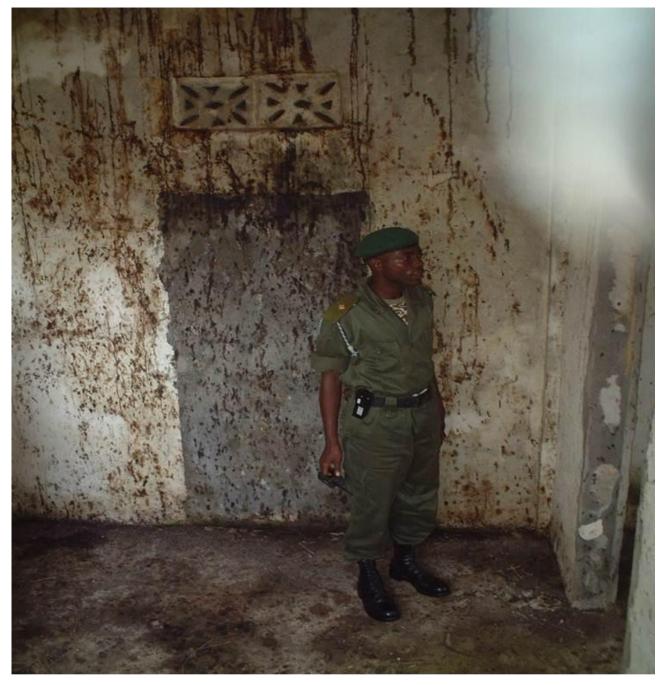


Figure 4: Officer of the recently formed Republic of Sierra Leone Armed Forces examining the Killing House in Kailahun (Reproduced with kind permission of M. Russell)

The site was never investigated forensically and will have been destined to enter Sierra Leone's highly complex oral tradition. Should that house, and many other similar sites, not have been the subject of international police and archaeological investigation, as was the case following the acts of genocide conducted at Srebrenica in Bosnia in 1995 (Manning 2008)? There are strong arguments both for and against.

The cannon can probably wait, but what about the 'Killing House'? Current investigations of Nazi slave and extermination camps (Sturdy Colls 2013, 50-53) exemplify the essential corroboration that archaeology provides, not just of the chronology of violence but also in understanding how and why it is executed. But should Sierra Leone have to wait 70 years for archaeological investigation of its recent past, especially given the ephemeral nature of much of the evidence and its jungle environment?

An essential consideration of any archaeological intervention must be the effects that might arise in a country still delicately poised between conflict and reconciliation. The Mano-Kpende cannon might provide an uncontroversial and discrete subject of enquiry. However, the 'Killing House' sits in the context of a 10-year conflict which cost tens of thousands of lives and left a legacy of innumerable amputees and up to 300,000 refugees or displaced people.

Sierra Leone's 5.6 million population comprises eight major ethnic groupings across 20 native tribes as well as the Creole descendants of resettled freed slaves from North America, who share Muslim, Christian and indigenous beliefs. Other realities include a literacy rate below one third, and life expectancy varying from 37 to 48 years (anon. 2002; anon. 2012). Superimposed will be various residual affiliations from the conflict. Any interventions we make should ultimately be agents for reconciliation rather than retardants; or can we be entirely neutral and apolitical?

It would be an unambitious prospectus for any nation which precluded archaeology, were it available, as one of the instruments for investigating the recent past. However, as Gemma Smith (2013) recently argued in *The Post Hole*, archaeology in zones of current and recent conflict must be alert to risks of politicisation and academic compromise. It may be that even in 2013 the social, political and academic environments militate against any effective investigation and archaeological synthesis of the recent civil war. However, that does not necessarily preclude a role for archaeology in the longer-term reconstruction of Sierra Leone.

The title for this article reflects the theme of a conference recently held by the University of York's Postconflict Reconstruction and Development Unit (PRDU) in partnership with Columbia University. 'Voices from Fragile States' explored the role of education in areas of conflict and fragility. In the context of Sierra Leone there is indeed a strong case to be made for developing local capacity in the education sector, and that should encompass support to the country's main university. The University of Sierra Leone, founded in 2005 from the earlier Fourah Bay College (itself dating back to 1827), includes Faculties of Arts and Architecture and has some experience in peace and conflict studies.

However, successful archaeology does require experience in project management, the development of particular skills and, perhaps most importantly, an ability to synthesise data in an open academic environment. Are there options other than the Mano-Kpende cannon and the 'Killing House' that might provide a practical strategy, supporting both academic enquiry in a nascent university and a national recovery programme? The answer might rest in Bunce Island and its deserted slave fort.

Bunce Island lies on the Sierra Leone River about 20 miles upstream from Freetown at the uppermost point accessible to shipping. Narrow and less than a mile in length, it was the site of one of 40 major European forts on the West African coast and owned by a series of British firms from around 1670. Between 1756 and the Abolition of Slavery in 1807, large numbers of slaves were despatched from there to America, mostly to plantations in South Carolina and Georgia.

The present ruins (Figure 5) mark a series of six forts on the site. After the Abolition, the site continued as a saw mill and trading post until the island was finally abandoned in 1835. It was declared a national monument in 1948 and achieved World Heritage Tentative List Status on the 1st June 2012 (anon. n.d.c).



Figure 5: Part of the outer wall and Merchant Dormitory of Bunce Slave Fort (Image Copyright: Andrew Marriott)

Even in bright sunlight Bunce Island retains an oppressive atmosphere and in many respects a visit there can be almost as disturbing as considering the recent conflict itself (Figure 6). Yet it is perhaps more accessible both practically and academically. In 2005 the ruins of the fort still survived much of the jungle encroachment (Figure 7) but the external graveyard was heavily overgrown (Figure 8). Still scattered on the ground were remains of glass and clay pipes.



Figure 6: Bunce Slave Fort southern fortifications (Image Copyright: Andrew Marriott)



Figure 7: Ruins of The Great House of Bunce Slave Fort (Image Copyright: Andrew Marriott)



Figure 8: Bunce Island Christian graveyard (Image Copyright: Andrew Marriott)

Thankfully, under the auspices of the Bunce Island Coalition (US, SL, UK), fieldwork began in 2011 and was conducted by Professor Christopher DeCorse under the direction of Joseph Opala, with aims to stabilise, preserve and conserve the fort and eventually hand over the project to local control (Kamara 2011; DeCorse 2013).

Professor Opala, now teaching at James Madison University, lived for 17 years in Sierra Leone and maintains close connections with its university (anon. n.d.b). Bunce Island is of international importance, not only because of the unique level of its survival and preservation but also because of its pivotal place in African, American and British history. The Coalition's work is likely to become a vital component of Sierra Leone's heritage and tourist industries.

One fascinating aspect of this erstwhile humble site is that one of Bunce Island's former agents in Charles Town, South Carolina, was a member of the American contingent negotiating the Treaty of Paris to conclude the American War of Independence. The British team in Paris was led by Richard Oswald, the owner of Bunce Island (anon. n.d.a)!

It is encouraging to see both the investment in Bunce Island and the aspirations for long-term local involvement. However, the real potential for the project ultimately lies in local empowerment (Figure 9).

Bunce Island could be truly transformative for the country through education and specifically through archaeology. A local academic cadre, empowered by the empathy of recent national trauma, should be given the instruments through which they could synthesise the slave trade; a lens through which we might both complement and challenge European and North American approaches.

More importantly, perhaps, the next step might then be a confident and indigenous investigation into the 'Killing House' and all such similar sites. How much better would it be if we didn't have to wait for two or three generations? Arguably more than most nations, Sierra Leone needs to understand its past, both recent and ancient. Archaeology would be the enabler of a historical narrative and certainly not history's handmaiden.



Figure 9: An artillery piece turned into a symbol of piece, the 'War Don Don' Gun in Daru (Reproduced with kind permission of M. Russell)

This short piece simply presents some personal observations but it does also seek to provoke some consideration and debate. Who does the archaeology and for whom; and what about agendas? Not just in Sierra Leone, but world-wide, there will be open, hidden, complementary and conflicting imperatives in investigating the past. Our discipline may have an exciting role in post-conflict reconstruction strategies around the world. Are we institutionally ready to make that contribution? I am also, in part, responding to a question posed by a former military colleague, albeit with some mischief: "So what's the point of archaeology?" Maybe if he had stubbed his toe on a half-buried cannon...?

The author served in the British Army, including duty in Northern Ireland, the Balkans, the Middle East, the Caucasus and West Africa, before graduating from the University of York in Archaeology and embarking on a Masters degree in Medieval Archaeology

Bibliography

anon. (2002) 'Recovery Plan 2002-2003'. *Sierra Leone Government*. Available at: reliefweb.int/report/sierra-leone/nationalrecovery-strategy-sierra-leone-2002-2003 [Accessed 16th April 2013]

anon. (2012) 2011 Annual Report: United Nations Development Programme Sierra Leone. Freetown: United Nations Development Programme. Available at: sl.undp.org/content/dam/sierraleone/docs/annualreports/undpsl_ann_rpt_2011.pdf [Accessed 17th April 2013]

anon. n.d.a *Bunce Island: A British slave castle in Sierra Leone*. Available at: bunce-island.org [Accessed 17th April 2013]

anon. n.d.b 'Faculty Profiles: Joseph Opala'. *James Madison University*. Available at: jmu.edu/honorsprog/opala.shtml [Accessed 16th April 2013]

anon. n.d.c 'World Heritage Centre Tentative Lists: Bunce Island'. *United Nations Educational, Scientific and Cultural Organization*. Available at: whc.unesco.org/en/tentative lists/5745 [Accessed 17th April 2013]

DeCorse, C. (2013) 'Christopher DeCorse'. *Academia.edu*. Available at: syr.academia.edu/ChristopherDeCorse [Accessed 17th April 2013]

Kamara, I.S. (2011) 'Archaeologists discover slave handcuff on Bunce Island'. *Sierra Express Media*. Available at: sierraexpressmedia.com/archives/25636 [Accessed 17th April 2013]

Manning, D. (2008) 'Investigating Genocide - Srebrenica'. Platypus Magazine. 99. 16-20

Smith, G. (2013) 'Archaeologists, propaganda and the military: Libya's cultural heritage and the role of archaeologists in a political crisis'. *The Post Hole*. 27. 7-16

Sturdy Colls, C. (2013) 'The Archaeology of the Holocaust'. British Archaeology. 130. 50-55

Capitalism, chaos and our postmodern society

Paul Joseph de Mola¹

¹School of Archaeology and Ancient History, University of Leicester, Leicester, LE1 7RH Email: pjd24@student.le.ac.uk

There was a time not so long ago when design and craftsmanship were part of a local philosophy; where business ethics were driven by delight in one's work and pride in one's community. An era of rational order and symmetrical beauty reflected in society's production of goods and arts. It was from this environment that a small Italian-American tomato packing plant sprung up in the heart of New York City allowing a local immigrant family to benefit from America's post-war economic expansion. However, society's postmodern evolution brought about structural changes which negatively affected this business and as a result, their way of life.

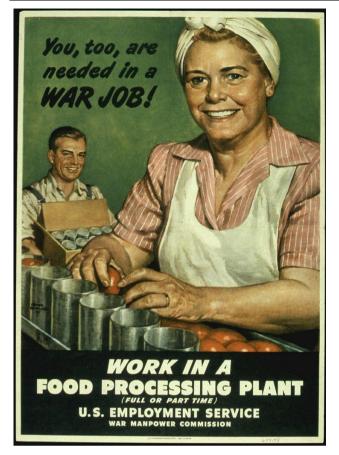
In this article, I will address postmodernism from three vantage points. First, I will examine manufacturing and labour's surrender to the powers of 'McDonaldization'. Second, I will describe the rise of a depersonalised 'corporate America' and the twilight of localism in the wake of postmodernity. Thirdly, I will analyse a museum's recent trek into the abyss of a postmodern exhibition. All the while, I shall emphasise the material examples of this social theory.

McDonaldization

In the post-World War II era, craftsmanship and commerce became increasingly controlled by megacorporate machines which centralised creativity, production and trade; effectively converting human labour to automatons while cultivating consumers into mere purchasing agents (Ritzer 2001, 200; Smart 2005, 268 and 270; in contrast to Jameson 2005, 265). It is this process that George Ritzer (2001, 198, 203) labeled as 'McDonaldization', and as such, a part of Modernity. However, while Ritzer was right in noting that McDonaldization is a 'process', he did not fully articulate its transcending role as a bridge between two socio-economic eras (Figure 1), respectively the Modern Age and postmodernity (Ritzer 2001, 201).

For example, Ritzer (2001, 201-03, 214) struggled to reconcile the seemingly self-contradictory nature of McDonaldization as a well-organised and efficient structure which paradoxically leads to an irrational and dysfunctional working class. Observable in everything from corporate and labour relations to consumer products (see below). Nevertheless, he maintained that McDonaldization is a *modern* process working in the increasingly synchronised, yet chaotic postmodern world (Ritzer 2001, 209); a valid but unsound argument.

Applying the concept of entropy for a moment, if the 'underlining' rational system (capitalism) has remained constant, emergent irrationality cannot be simply explained as a 'paradoxical' part of the aforementioned rational system (Baofu 2007, 108; Ritzer 2001, 209-10; in contrast to Ritzer 2001, 205). What can be said then? Something 'foreign' has entered and infected the balance of the original capitalist 'system'.



I therefore posit that the 'predictable' rationality of McDonaldization is nothing of the kind. Rather, it is a cultural dynamic or 'energy' that upon spreading into the original economic environment altered it from its original state and created for itself, and society at large, what may be dubbed a late form of capitalism (Ritzer 2001, 211).

In short, McDonaldization (along with other processes) has aided in the manifestation of the postmodern order, or if you like, *disorder*. Hence, it is not a modern process, but an embryonic stage of postmodernity.

Figure 1: During the Second World War, a concerted effort on the part of the Federal Government and corporations to exploit American productivity inadvertently led to an assembly line consumer culture (Bensing 1945)

Corporatoxication

A case in point was Giuseppe Creazzo & Sons, Inc., my family's small tomato packing plant and wholesale distributor specialising in fresh organic tomatoes. It was started by my great-grandfather, Joseph Creazzo, and had its greatest success during the Great Depression and post-war boom. During this period, he supplied many local retail grocers and restaurants in downtown New York, typically owned by both immigrant and indigenous families. Simplicity of function was its rationale. There were no formal docks for drop shipments.

For example, the crates of tomatoes were unloaded from a truck at curbside. The 'processing facility' was a commercially-zoned basement, with the outgoing 'tomato cartons' made of inexpensive cardboard and the plastic wrap mounted to basic spindles. All processing of goods was completed by hand; wife, sons, daughter and granddaughter would select, wash, box and wrap the tomatoes. The family then drove the freshly packed tomatoes to a grocer or restaurant on a daily basis (King 2005, 222).

However, by the late-1950s, mega-corporate supermarkets, such as The Great Atlantic & Pacific Tea Company, offering a wider diversity of goods at discounted prices, had opened in the vicinity and local customers were drawn away, effectively killing off 'mom and pop' grocers, specialty meat shops and later restaurants (Anderson 2002; Holton 2005, 299). The rationality of an era simply became antiquated. Hence, an entire local economy was supplanted by an (impersonal) global mega-corporation (Ritzer 2001, 211).

For example, tomatoes, along with numerous other foodstuffs were now machine packed out-of-state by mega-distributors, such as Roma Foods, which also introduced 'uncommon' or international products into local neighbourhood supermarkets (Harvey 1989, 299 and 304-05; Kelly 1999, 124). Consequently, the neighbourhood packaging distributers, such as Giuseppe Creazzo & Sons, were forced out of business and the individual family members separated to find other occupations.

Here in a microcosm, Ritzer's McDonaldization takes us cleverly from *bourgeois* modernity into the hypercomplexity of postmodern 'corporatoxication' - a convoluted state where multiple global institutions centralise planning and development, thus dislodging craft specialisation from the local community. In a socioeconomic sense, repetitive episodes, such as the narrative above, perhaps led to alienation between producer, retail employee and consumer (Palumbo and Scott 2005, 51-55). The effects of which may have included symptoms of social depersonalisation through the expunging of local 'creativity' along with other (local) socio-attributes (Levy 2010, 294).

Arguably, this aided societal fragmentation and cultural devolution by ceding localised planning and production to 'unseen forces' whose 'foreign' goods became 'local' cultural symbols through a well executed market-driven diffusion (Pikirayi 2006, 233). What we are left with are competing mega-corporations that conceive, develop and herd individual demand for goods, which are frequently offered in a vast array to an overwhelmed consumer (Harvey 1989, 286; Ritzer 2001, 203-05; in contrast to Holton 2005, 304-05).

The postmodern in an archaeological display

Thus far, we have discussed the socioeconomic influence of postmodernity on our everyday lives as consumers. However, I now wish to address the affect of postmodernism on the arts by highlighting an example from a museum display. Now, it should be clearly understood that part of the conceptualisation of the postmodern within an archaeological exhibit requires a divergence from the singularity of material interpretation (Keene 2006, 2-3). Moreover, it is suggested that a postmodern exhibit should break with static cultural ideals and immerse the public in a discontinuity of time where overlapping structural-agents and their past are understood through the direct sensory experience of the observer, ideally within a recreated landscape.

At the Tempe Historical Museum in Arizona, cultural plurality is found in a free-standing two-sided glasscased display that doubles as a cross-cultural and inter-period entrance for the larger exhibit entitled: Surviving in the Desert. The glass case is delimited in part by information-laden standees that offer the viewer an aesthetic design which echoes Arizona symbolism in the form of Saguaro cacti. However, the emphasis on diversity at the expense of narrative becomes very apparent when one immediately notices the discontinuity with regards to the placing of bicultural artefacts (Keene 2006, 5 and 7; Johnson 2010, 199-201).

For example, on one side, prehistoric Hohokam artefacts (for example, weaved grain baskets, stone axes, ground stone known as 'rip-rap', which were used to close off or redirect irrigation channels) are displayed. Besides functional descriptions of the artefacts, the footnotes next to a collection of ceramic water jugs provide a written cosmological interpretation of water (i.e. its environmental scarcity and subsequent sacredness to the Hohokam). With virtually no break however, the other side showcases the historical artefacts of early settlers (for example, a hoe, branding irons, irrigation valves). As you round that side it merges into a Salt River Project/water-sports pastiche, drawn from artefacts from the early twentieth century.

Suddenly the message of the exhibit becomes vivid; (in this blurring of contexts) a shared landscape binds the historical celebration of water to its prehistoric and sacrosanct past. Eliminating time, from the observer's point of view, the agricultural backgrounds of two (fundamentally unrelated and dissimilar) cultures meet in a mutual landscape/environment.

This is further realised by utilitarian disparities such as pioneer iron tools displayed parallel with indigenous stone tools, both competing for the viewer's attention. It does not stop there either. Returning to the theme of water, a rather striking cross-cultural and inter-period contrast appears at one of the lower corners of the case. Here, a Hohokam plain red olla (a pot commonly hung inside an indigenous house to hold water) is positioned next to a nineteenth century miner's canteen with a shoulder strap.

This begs the rational question - does a canteen really have anything in common with an olla? Were the ideas, aspirations or interests of the miner the same as the Hohokam farmer? We understand their mutually shared environmental need for water. However, from this are we to infer a commonly held view of landscape, or is this just a subjective conflation of landscape and environment (Johnson 2010, 159)?

Conclusion

Postmodernity is a cultural condition that claims objectivity is a fallacy. If this is true, then the following question must be posited - from what *objective* premise are postmodernists drawing their (quite authoritarian!) conclusions regarding positivism? An apparent Epimenides paradox then follows. To state emphatically that all observation is subjective logically invites their views to the same subjective criticism. This truth alone invalidates their argument. Another way to view the postmodern condition is this way - if everything is subjective, then the purpose of logical inquiry into any question becomes irrelevant; deductions become untenable and conclusions irrational because objectivity is not achievable.

If modernism contains flawed conclusions because humans are essentially flawed beings, then postmodernity at its best offers only justification for our fallibility. Furthermore, if archaeologists are going to wade into the debate of postmodernity, then they must be expected to engage in moral questions by way of positivist authority.

For example, social fragmentation should not be perceived as anymore 'good' for society, as scholastic under-achievement would be considered 'academic' for education. Dialectically, a postmodernist may respond that what we perceive as good and bad are socially constructed concepts and that societal fragmentation is relative to one's viewpoint. Countering, the modernist may reply that the correct structure of society cannot be arbitrary, otherwise order and madness become immaterial.

To this end, I analogise Fromm (1941, 41, 46-48 and 99) when I say that Western civilisation has moved towards an intellectually confused and thus morally disordered state. When we move so far, so fast, we should pause and ask ourselves if it was reasonably the best course for society to undertake. If it was not, then science and the humanities should try to illuminate the path back to the truth, not snuff out the torch.

Bibliography

Anderson, A. H. (2002) A & P: The Story of The Great Atlantic & Pacific Tea Company. Charleston: Arcadia Publishing

Baofu, P. (2007) *The Future of Complexity: Conceiving a Better Way to Understand Order and Chaos*. Singapore: World Scientific Publishing

Bensing, F. (1945) *You, too, are needed in a war job!: Work in a food processing plant (full or part time)*. Available at: <u>library.marshallfoundation.org/posters/library/posters/poster_full.php?poster=690</u> [Accessed 2nd June 2013]

Fromm, E. (1941) Escape From Freedom. New York: Henry Holt and Company

Harvey, D. (1989) 'Time-Space Compression and the Postmodern Condition', in D. Harvey (ed.) *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Blackwell Publishing. 284-307

Holton, R. (2005) 'Globalization', in A. Harrington (ed.) *Modern Social Theory: An Introduction*. New York: Oxford University Press. 292-312

Jameson, F. (2005) Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions. London: Verso Books

Johnson, M. (2010) Archaeological Theory: An Introduction (2nd Ed.). Chichester: Wiley-Blackwell

Keene, S. (2006) 'All that is solid?: Museums and the postmodern'. Public Archaeology. 5 (3). 185-98

Kelly, R. J. (1999) The Upperworld and the Underworld: Case Studies of Racketeering and Business Infiltrations in the United States. New York: Springer Publishing

King, A. (2005) 'Structure and Agency', in A. Harrington (ed.) *Modern Social Theory: An Introduction*. New York: Oxford University Press. 215-32

Levy, P. (2010) *Industrial Organizational Psychology: Understanding the Workplace* (3rd Ed.). New York: Worth Publishers

Palumbo, A. and Scott, A. (2005) 'Classical Social Theory, II: Karl Marx and Émile Durkheim', in Harrington, A. (ed.) *Modern Social Theory: An Introduction*. New York: Oxford University Press. 40-62

Pikirayi, I. (2006) 'Gold, Black, Ivory, and Houses of Stone: Historical Archaeology in Africa', in M. Hall and S.W. Silliman (eds.) *Historical Archaeology*. Malden: Blackwell Publishing. 230-250

Ritzer, G. (2001) 'The McDonaldization of Society', in G. Ritzer (Ed.) *Explorations in Social Theory: From Metatheorizing to Rationalization*. London: Sage. 198-217

Smart, B. (2005) 'Modernity and Postmodernity: Part I' in A. Harrington (ed.) *Modern Social Theory: An Introduction*. New York: Oxford University Press. 252-72

Big kids: Are different methods needed to present heritage to adults and children?

Andrew Henderson-Schwartz¹ ¹Department of Archaeology, University of York, The King's Manor, York, YO1 7EP Email: ajhs500@york.ac.uk

For the presentation of heritage to adults, there are inconsistencies between the advice provided by the academic community and the physical forms of heritage presentation, whether in museums, television or other media. These inconsistencies have meant that there is now a divide, which arguably should not exist, between the methods used to present heritage to children and those used to present it to adults. This article will review the methods advised to present heritage to children and adults, highlight the inconsistencies between this advice and its application, and explore the reasons for these inconsistencies being present, as well as suggesting future directions for the field of heritage studies and museology.

Presenting heritage to children: Methodology and application

The scholarly discourse surrounding the methods which are most effective in communicating heritage to children has flourished in the last 30 to 40 years with the dawn of the digital age and the emergence of new forms of communication technology such as television, radio, and more recently, touchscreen technology. Presenting the past to children is often clearly defined by academics, with sections or whole works being specifically dedicated to children (Rider and Illingworth 1997; Black 2005).

When presenting heritage to children it has been argued that responsive, colourful and stimulating exhibitions are required (Hooper-Greenhill 1994; McManus 1996; O'Neill 1999). To achieve this, many stress the importance of having multi-sensory and interactive features in addition to role-playing and a diversity of content (Cohen 1996; Black 2005).

Another key component of the presentation of heritage to children it is argued, is the presence of a clear orientation in heritage content, where the child can satisfy their curiosity and challenge themselves, but ultimately control their environment and rate of learning (Falk and Dierking 2000). Finally it is generally perceived that the immersion in heritage for children should be an experience akin to playing and games, rather than school and academic work (Thomas 1994).

These recommendations are generally accepted by the majority of the academic community and their presence in both museums and other forms of heritage content is apparent. For example, the Jorvik Viking Centre in York is a heritage site marketed mainly to families with children and features multi-sensory exhibits with Viking sounds, smells and sights (anon. n.d.b). The site also has a clearly defined route, along which visitors can touch Viking objects and even play Viking games (anon. n.d.b).

Similarly interactive features can be seen at other 'child focused' museums and exhibits such as the 'Mudlark's' section of the Museum of London, which is described as an "interactive play area" (Museum of London n.d.). Outside of the museum sector, TV shows such as the 1980s series 'Voyager's' have been created specifically for families and children, utilising dramatics, problem solving and a diverse range of topics to engage their audience (anon. n.d.a). Therefore, it is clear that there is consistency between the recommendations provided by the academic community and the practical application of those recommendations in the presentation of heritage to children.

Presenting heritage to adults: Methodology and application

The literature on the methods for presenting heritage to adults is far less clearly defined than that relating to children. It is common for adults not to be defined as a separate audience and to instead be referred to simply as 'visitors' (Hooper-Greenhill 1991; Black 2005). Some, such as Hooper-Greenhill (1991), argue that adult engagement in heritage should often centre on specific events such as lectures, practical courses and fairs.

However, upon detailed inspection, it is clear that, for the most part, many of the methods highlighted as important in the presentation of heritage to adults are almost identical to those suggested for children. For instance, Black (2005) and Pitman-Gelles (1981) propose that clear orientation in museums and the ability to handle objects are vital in engaging all visitors. This is a view supported by others such as Moscardo (1996), Ambrose and Paine (2006) and Whitcomb (2003) who also add that interactive features and the ability of the individual to participate and structure their own learning is vital in captivating the attention of visitors of all ages. In essence, scholars suggest, although perhaps not always explicitly, that the methods of presenting heritage to adults and children are fundamentally the same.

Naturally, the content used in these methods must be adapted in terms of intellectual level for adults and children. Yet, based on the literature alone it would not be foolish to expect that the methods used in the presentation of heritage to children and adults should be almost identical, with content being the only differing factor. However, contrary to this assumption, it would appear that in many cases the literature on the presentation of heritage to adults does not reflect current practice.

The museum environment, for adults, it can be argued has changed very little in the last 250 years. For example, the British Museum features cabinets with long bodies of associated descriptive text, almost no interactive features and no clear route of trail for an adult visitor to follow. Although audio guides can be acquired for free (British Museum n.d.a), it could be argued that the way in which the content of the British Museum is presented to adults has essentially changed very little since its founding in 1753 (Caygill 1981).

By contrast, a child or family entering the British Museum is provided with dedicated additional materials, which feature clearly labelled trails to follow and interactive components such as treasure hunts, cartoons and puzzles, which are ultimately designed to heighten the experience and encourage learning (British Museum n.d.b). In addition to museums, other forms of heritage presentation are equally unreflective of the literature. For instance, TV shows and series such as 'Archaeology: A secret history' are often highly descriptive, narrative-driven and lacking of content diversity (British Broadcasting Corporation 2013).

There is thus a clear disparity and inconsistency between the literature on the presentation of heritage to adults and its practical applications. This is in spite of methods of good presentational practice, such as clear orientation, interactive features and the ability to explore and handle objects being seen by the field of museology and heritage studies as being equally valid for both adults and children. The question, therefore, arises as to why practically these methods have only been applied to children. While there is no physical data that may answer this question, patterns in the academic literature may provide a possible explanation.

Explaining the inconsistencies

As has been shown, there are significant inconsistencies between the methods of presenting heritage to adults as recommended by academics, and the practical application of those methods in museums and in other heritage content. These inconsistencies can possibly be explained through analysing trends present in the academic literature.

The first recognisable pattern that emerges from a review of the academic literature is that when discussing methods of heritage presentation, many authors place significantly more emphasis on children than adults. For example, authors such as Black (2005) and Ambrose and Paine (2006), dedicate clearly labelled sections to the methods of presentation appropriate for children. While it could be reasoned that the rest of their respective works are dedicated to detailing methods for adults, this is not explicitly stated and as such these methods may wrongly be attributed as solely appropriate for children. There are also far more subtle examples of this emphasis, through the use of illustrations in the books which suggest these methods (Figure 1).



Figure 1 (L-R): (Caulton 1998), (Black 2005) and (Hooper-Greenhill 1999) all focusing on children in the front covers

Added to this, entire publications such as Rider and Illingworth (1997) are focused purely on presenting heritage to children. This debatably serves to increase the perception by curators and heritage organisations that the methods required when presenting to children and adults must be distinct. Furthermore, discussions on features which are argued to be key components of any exhibit, respective of whether it is designed for children or adults, such as interactivity and clear orientation, often overly focus on their application to children. For example, while Caulton (1998) and Henningar-Shuh (1999) both argue that hands-on components in exhibitions are key forms of heritage presentation, applicable to all age groups; they dedicate the majority of their respective publications to assessing the effects of these components in relation to children (Caulton 1998; Henningar-Shuh 1999).

The second trend to emerge from the literature is that the role of heritage as an educational enterprise is often far more emphasised in relation to children. For example, Ambrose and Paine (2006, 48) in their introduction describe museums as having "a pivotal role in providing education services to users, whether these are children or adults". However, the section of their publication which focuses on both the external and internal educational services that a museum should offer only includes references to children and school visits (Ambrose and Paine 2006).

Additionally, there are more subtle examples of the focus of the educational role of the museum as being solely for children. Hooper-Greenhill (1994, 142) clearly details that when it comes to education, museums should cater for "a range of visitors, including schools, families and adult learners". However, every illustration in that section of her publication only presents images of children being involved in learning (Figure 2). These illustrations may suggest to the reader, either actively or passively, that children are the audience who are most in need of education in museums.



The combination of these two patterns in the academic literature mean that although the same methods and educational foci are suggested for all audiences regardless of age, the message which is actually transmitted to curators and other peoples involved in the presentation of heritage is that different methods and attentions must be applied to children and adults. Therefore, it could be argues that the differences currently seen in the presentation of heritage to adults and children are based on the poor communication which curators and other people receive from the academic community, rather than qualitative or quantitative data indicating that distinctions are required.

Are different methods actually needed?

Aside from the patterns in academic literature that may explain why the same methods have not been applied to adults and children, we must ask ourselves whether there is any practical evidence to suggest that adults would not respond just as well to the same methods as children.

Very little research has been done in this area; however there have been tentative indications that adults participating in certain children's exhibits prove particularly adept at retaining information (Aggleton and Waskett 1999). Additionally some have cited the value of using less formal methods when presenting heritage to adults, such as games and interactivity (Grenier 2010; Parrish 2010).

It is therefore possible, if not probable, that using the methods recommended by the academic community when presenting heritage to adults do actually work. However, as it currently stands, these methods are defined practically as being solely applicable to children. As such, a system has been created in which adults feel as if to engage in these methods would present them as childish and immature.

Evidence for this can be seen in the fact that the proportion of 16-24 year olds that visit a heritage site or museum is significantly less than the proportion of 5-10 and 11-15 year olds (anon. 2010), indicating that some young adults perceive themselves as 'too old' for these places. Furthermore, the fact that the content applied to these techniques is often at a juvenile level may explain why research indicates that adults and older teens often feel that museums do not reflect their needs and are more suited to children (anon. 2008).

Presenting the past: Divided from the start?

If the methods recommended by the academic community when presenting heritage to adults do actually work, is it possible for them to now be implemented, when divisions between presenting the past to adults and children are so deeply entrenched into modern culture? Arguably, the past can provide an indication of whether or not this is feasible.

The methods used and audiences targeted when presenting the past have changed dramatically since the origins of the discipline of museology and heritage studies. Many of these changes have been in response to divisions and restrictions in both the literature and the practical manifestations of that literature.

Divisions and restrictions in the presentation of heritage have been present since its modern conception in the 16th and 17th centuries, when the private collections of those such as Augustus of Saxony (Murray 1996) were strictly concealed from the public eye and remained the playthings of the aristocracy (Hudson 1975; Alexander 1979). Even with the emergence of 'public' museums in the 18th and 19th centuries (Kavanagh 1994), attending an exhibition was still an impossible prospect for the majority of the populace, who were viewed as being incapable of appreciating artefacts of the past (Hudson 1987). Moving forward to the present, these class restrictions have for the most part been overcome, founded as they were in social biases and conceptions rather than in reality and fact.

We can draw parallels between the socially constructed divisions in heritage seen in the past and the divisions in relation to presenting heritage to adults and children that we see in the present. These divisions were and are both based upon socially constructed interpretation and perception, rather than on reality and fact. The past shows us that it is possible to overcome divisions, but the first step to doing so is to acknowledge that they are there.

Conclusion

From the literature, it is clear that the current methods recommended for presenting heritage to adults and children are very similar. Yet it is also apparent that much of the literature places a far greater emphasis on the value of heritage to children and families.

Some have touched upon the fact that adults who experience children's exhibits can benefit from them (McManus 1994; Black 2005). However, these vague suggestions are based on anecdotal rather than quantitative data and have also attributed the act of parents teaching their children as being the cause of any benefit, rather than the way in which the content is presented.

There has been very little research done on the value of the current methods used in children's exhibits for an adult audience and, therefore, as it currently stands, the divisions in the presentation of heritage to adults and children can be paralleled to the class divisions seen in the past, where there was no evidence to suggest that the majority of the populace should be excluded.

To overcome this, what is required is the collection of primary qualitative and quantitative data to provide a robust assessment of the current methods actively used in the presentation of heritage to adults. This assessment may reveal, as suspected, that the reason for continuing to use these current and somewhat outdated methods is due to a lack of clear communication from the academic community, rather than for their effectiveness.

Bibliography

Aggleton, J.P. and L. Waskett (1999) 'The ability of odours to serve as state-dependent cues for real-world memories: Can Viking smells aid the recall of Viking experiences?'. *British Journal of Psychology*. 90 (1). 1-7

Alexander, E.P. (1979) *Museums in Motion: An Introduction to the History and Functions of Museums*. Nashville: American Association for State and Local History

Ambrose, T. and Paine, C. (2006) Museum Basics (2nd Ed.). London: Routledge

anon. (2008) 'My son is now a bit too old for the science center'. *Museum Audience Insight*. Available at: reachadvisors.typepad.com/museum_audience_insight/2008/12/my-son-is-now-a-bit-too-old-for-the-science-center.html [Accessed 23rd May 2013]

anon. (2010) 'Taking Part - Statistical Release'. *Department for Culture, Media and Sport*. Available at: gov.uk/government/uploads/system/uploads/attachment_data/file/77322/TakingPart_AdultChild2009-10_StatisticalRelease.pdf [Accessed 23rd May 2013]

anon. n.d.a 'Voyagers!'. Internet Movie Database. Available at: imdb.com/title/tt0083500/ [Accessed 8th June 2013]

anon. n.d.b 'About Jorvik'. *Jorvik Viking Centre*. Available at: jorvik-viking-centre.co.uk/about-jorvik/ [Accessed 8th June 2013]

Black, G. (2005) The Engaging museum: An interpretive approach to visitor involvement. London: Routledge

British Broadcasting Corporation (2013) Archaeology: A Secret History. Available at: bbc.co.uk/ programmes/p0109jnw [Accessed 23rd May 2013]

British Museum n.d.a *Family Visits*. Available at: britishmuseum.org/visiting/family_visits.aspx [Accessed 23rd May 2013]

British Museum n.d.b Young Explorers. Available at: britishmuseum.org/explore/young_explorers1.aspx [Accessed 23rd May 2013]

Caulton, T. (1998) Hands-On Exhibitions: Managing Interactive Museums and Science Centres. London: Routledge

Caygill, M. (1981) The Story of the British Museum. London: British Museum Publications

Cohen, S. (1996) 'Children and Adults', in G. Durbin (eds.) *Developing Museum Exhibitions for Lifelong Learning*. Norwich: The Stationary Office. 73-76

Falk, J.H. and Dierking, L.D. (2000) *Leaning from Museums: Visitor Experiences and the Making of Meaning*. Lanham: Rowman and Littlefield

Grenier, R.S. (2010) 'All work and no play makes for a dull museum visitor'. *New Directions for Adult and Continuing Education*. 127. 77-85

Henningar-Shuh, J. (1999) 'Teach Yourself to Teach With Objects', in E. Hooper-Greenhill (eds.) *The Educational Role of the Museum*. London: Routledge. 80-91

Hooper-Greenhill, E. (1991) Museums and Gallery Education. Leicester: Leicester University Press

Hooper-Greenhill, E. (1994) Museums and Their Visitors. London: Routledge

Hudson, K. (1975) A Social History of Museums: What the Visitors Thought. London: Macmillan Press

Hudson, K. (1987) Museums of influence. Cambridge: Cambridge University Press

Kavanagh, G. (1994) Museums and the First World War: A Social History. London: Leicester University Press

McManus, P. (1994) 'Families in Museums', in R. Miles and L. Zavala (eds.) *Towards the Museums of the Future*. London: Routledge. 81-98

McManus, P. (1996) 'Visitors: Their Expectations and Social Behaviour', in G. Durbin (eds.) *Developing Museum Exhibitions for Lifelong Learning*. Norwich: The Stationary Office. 59-62

Moscardo, G. (1996) 'Mindful visitors: Heritage and tourism'. Annals of Tourism Research. 23(2). 376-397

Murray, D. (1996) Museums: Their History and Their Use. London: Routledge

Museum of London n.d. *Visits by families*. Available at: museumoflondon.org.uk/london-wall/Visiting-us/Families/ [Accessed 23rd May 2013]

O'Neill, M. (1999) 'Planning for People', in G.D. Lord and B. Lord (eds.) *The Manual of Museum Planning* (2nd Ed.). London: The Stationary Office. 21-38

Parrish, M.M.K. (2010) 'Reflections on adult learning in cultural institutions'. *New Directions for Adult and Continuing Education*. 127. 87-95

Pitman-Gelles, B. (1981) *Museums, Magic and Children: Youth Education in Museums*. Washington: Association of Science-Technology Centers

Rider, S. and Illingworth, S. (1997) Museums and Young People: A Report. London: The Museums Association

Thomas, G. (1994) "Why Are You Playing at Washing Up Again?" Some Reasons and Methods for Developing Exhibitions for Children', in R. Miles and L. Zavala (eds.) *Towards the Museums of the Future*. London: Routledge. 117-132

Whitcomb, A. (2003) Re-imagining the Museum: Beyond the Mausoleum. London: Routledge

Archaeology under the microscope

Lisa-Marie Shillito¹ ¹School of History, Classics and Archaeology, University of Edinburgh, Edinburgh, EH8 9AG Email: lisa@palaeo.eu

Most archaeologists are aware that what we can see in the field is only a fraction of the archaeological record. This is perhaps especially obvious to anyone who has excavated a Near Eastern tell site, ashy midden deposits, or multiple superimposed hearth deposits in caves. The photograph in Figure 1, showing hundreds of finely stratified layers in a midden at the Neolithic site of Çatalhöyük (Turkey) illustrates this quite nicely.



Figure 1: Finely stratified ash and organic layers in a midden at Çatalhöyük (Image Copyright: Lisa-Marie Shillito)

Although single-context archaeology is often regarded as a 'gold standard' in excavation methodology (for a great discussion of this see Colleen Morgan's blog; Morgan 2010), excavating a true 'single' context is limited firstly by our ability to visually resolve an individual layer, and secondly by our tools. I remember during one field season, Shahina Farid (former field director of the Çatalhöyük Project and Senior Research Associate at UCL) remarked that we can only dig at the resolution that a trowel will allow. You could even say, thirdly, that we are limited by time - how long would it take to excavate multiple single layers, less than 1mm thick, or to sieve these deposits to recover remains such as charred plants and animal bones? In reality therefore, we have to assign artificial 'single' contexts to these types of complex deposits.

Obviously there are problems here. How can we distinguish between individual daily activities if we group together multiple layers from several events, artificially labelled as a single unit? As discussed by Goldberg *et al.* (2009), if we are to move beyond broad interpretations of human behaviour, we need to examine the archaeological record on the scale at which human activities occur and are recorded – often this is the microscale. Daily activities produce signals which may be all but invisible to the naked eye, but which can be seen clearly by looking at deposits under the microscope.

One approach which addresses this problem is through the application of 'microarchaeology'. This term was used by Weiner (2010) to describe a combination of microanalytical techniques that aim to examine past human activity at a high spatial and temporal resolution. The past few decades have seen a steady increase in the application of these microanalytical methods to archaeology, many of which were first developed outside the discipline, for example in soil science or geology (Matthews *et al.* 1997).

In the past few years in particular, methods such as thin section micromorphology, combined with microbotanical and geochemical analyses, have become increasingly recognised as providing an essential insight into several aspects of the archaeological record. An example of the resolution of this approach is the identification of individual layers of wall plasters at the site of Çatalhöyük in Turkey, revealing the seasonal redecorating habits of the Neolithic population (Matthews 2005).

Similarly, we can identify single episodes of dust accumulation on floors, where microscopic debris became trapped underneath matting - a scenario familiar to anyone who has swept underneath a rug on hard flooring (Figure 2). And it is not just in buildings - this approach can also be used to identify formation processes of midden deposits (Shillito 2011; Shillito *et al.* 2011).

However, microscopic analysis still has its limitations. We can only identify activities which leave a visual signal, and even then there are some materials, particularly organic remains, which are almost impossible to identify using visual methods. By combining the microscopic analysis with chemical analysis, we can overcome this problem.

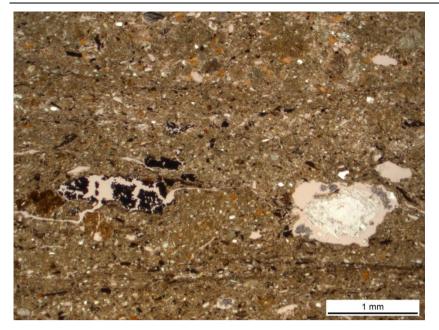


Figure 1: A layer of dust in a sequence of plaster floors at Kamiltepe (Image Copyright: Lisa-Marie Shillito)

Chemical analysis can be divided broadly into inorganic and organic methods. Inorganic methods include techniques such as infra-red spectroscopy (FT-IR) and X Ray Fluorescence (XRF), which can characterise the elemental and structural composition of materials such as mudbricks, plaster and stone. Organic techniques include Gas Chromatography Mass Spectrometry (GC/MS), which separate out and identify different components in complex mixtures of organic materials such as fats, oils and resins. Although organic techniques are more time consuming and expensive, the information they can provide is much more specific and in many cases can identify the exact origin of decayed material, for example distinguishing between layers of trampled animal dung and human latrine deposits (Shillito *et al.* 2011).

Microarchaeology at the University of York

The Department of Archaeology in York has several strengths, but is particularly strong in the fields of bioarchaeology and cultural heritage management, with period strengths in early prehistory and historical archaeology. In addition to this, the department is committed to the integration of humanities and science-based approaches in all aspects of the discipline.

The application of organic geochemical techniques is well established at the University of York, and is one of the major research areas of the BioArCh group. BioArCh have applied GC/MS and associated methods particularly to pottery samples, where they have been used recently to identify the types of foods that were being processed in Jōmon pottery (Craig *et al.* 2013). With pottery analysis, we can combine the analysis of 'invisible' chemical residues with microscopic analysis of plant remains in burnt food crusts, to provide a more complete picture of what the vessels may have been used for (Saul *et al.* 2012).

This 'microarchaeological' approach is being further developed through major research projects in the Department, such as the ERC InterArchive project (investigating microscopic and geochemical signals in burials), and is also included as an important part of the ERC POSTGLACIAL project at the Mesolithic site of Star Carr. The Department Research Committee has also supported the development of this methodology through funding pilot projects at important prehistoric sites such as Paisley Caves (USA) and Çatalhöyük (Shillito and Ryan in press).

Learning and teaching - the importance of practical approaches

Thanks to generous funding from the University Teaching Committee, the Department of Archaeology in York is now able to offer students access to facilities and training in this area, through a new microscope facility based in the BioArCh laboratories (Figures 3 and 4). 'Archaeology Under the Microscope' is a strategic learning and teaching project which aims to build upon existing strengths in the Department.

In response to module evaluation data, it was recognised that a key skill area, training in the use of modern microscopic facilities, was an under-represented area in the teaching of archaeological science and laboratory skills. The aim of 'Archaeology Under the Microscope' is to address this through developing a state of the art microscope laboratory and digital reference collection that can be used for teaching across undergraduate and postgraduate curricula, enabling students to become more involved in departmental research.



Figures 2-4 (L-R): Converting space in BioArCh into a microscope laboratory; one of the new Leica DM750P microscopes with integrated digital camera (Image Copyright: Lisa-Marie Shillito)

The importance of practical laboratory teaching in science subjects is well documented (Hofstein and Lunetta 2004), and competency in practical skills is also shown to be essential for employment in the archaeological workplace (Lydon 2002; Croucher *et al.* 2008). An integrated approach of practical microscopy training and digital image resources was used for example by Kumar *et al.* (2006) in teaching histology, and evaluation indicated that students strongly supported this integrated approach. The project produced a collection of reference images that could be accessed remotely by students, enabling them to revise materials demonstrated during practical sessions, in their own time.

A similar collection of reference images are currently being produced in York alongside a physical collection of microscope slides. These images will be archived with the York Digital Library (YODL), an online repository for multimedia resources at the University of York. YODL provides access to over 69,000 resources, including images, past exam papers and theses. The reference collection will be permanently available with YODL to support research, teaching and study in archaeology and beyond.

Reference materials have been selected to complement existing teaching within the Department of Archaeology (including pottery and bone thin sections), as well as areas of current research (such as microfossil analysis) to enable new teaching to be developed in this area in future. The project was recently presented at the University Learning and Teaching Conference 2013 (Figure 5), and the microscopes are now available for use in student projects.



It is hoped that this facility will provide a foundation that can be built upon in the future, and become an important teaching and research resource that will keep York at the cutting edge of archaeological investigation. Further information and case studies can be found on the author's blog at castlesandcoprolites.blogspot.co.uk/.

Figure 5: *Poster presentation at the York Learning and Teaching Conference 2013* (Photograph of author's poster reproduced with kind permission of Steve Ashby)

Bibliography

Craig, O.E., Saul, H., Lucquin, A., Nishida, Y., Taché, K., Clarke, L., Thompson, A., Altoft, D.T., Uchiyama, J., Ajimoto, M., Gibbs, K., Isaksson, S., Heron, C.P. and Jordan, P. (2013) 'Earliest evidence for the use of pottery'. *Nature*. 496 (7445). 351-354

Croucher, K., Cobb, H. and Brennan, A. (2008) *Investigating the role of fieldwork in teaching and learning archaeology*. Liverpool: Higher Education Academy Subject Centre for History, Classics and Archaeology

Hofstein, A. and Lunetta, V.N. (2004) 'The laboratory in science education: Foundations for the twenty-first century'. *Science Education*. 88 (1). 28-54

Goldberg, P., Miller, C.E., Schiegl, S., Ligouis, B., Berna, F., Conard, N.J. and Wadley, L. (2009) 'Bedding, hearths, and site maintenance in the Middle Stone Age of Sibudu Cave, KwaZulu-Natal, South Africa'. *Archaeological and Anthropological Sciences*. 1 (2). 95-122

Kumar, R.K., Freeman, B., Velan, G.M. and De Permentier, P.J. (2006) 'Integrating histology and histopathology teaching in practical classes using virtual slides'. *The Anatomical Record Part B: The New Anatomist*. 289 (4). 128–133

Lydon, J. (2002) 'Archaeology in the workplace: Teaching about the past in a changing world', in S. Ulm, C. Westcott, J. Reid, A. Ross, I. Lilley, J. Prangnell and L. Kirkwood (eds.) *Barriers, Borders, Boundaries: Proceedings of the 2001 Australian Archaeological Association Annual Conference*. Brisbane: Anthropology Museum, University of Queensland. 7. 129-135

Matthews, W. (2005) 'Micromorphological and microstratigraphic traces of uses and concepts of space, in I. Hodder (ed.) *Inhabiting Çatalhöyük: Reports from the 1995-1999 seasons*. Cambridge: McDonald Institute for Archaeological Research. 355-399

Matthews, W., French, C.A.I., Lawrence, T., Cutler, D.F. and Jones, M.K. (1997) 'Microstratigraphic traces of site formation processes and human activities'. *World Archaeology*. 29 (2). 281-308

Morgan, C. (2010) 'Where is single context archaeology?'. *Middle Savagery*. Available at: middlesavagery.wordpress.com/2010/02/23/where-is-single-context-archaeology/ [Accessed 3rd May 2013]

Saul, H., Wilson, J., Heron, C.P., Glykou, A., Hartz, S. and Craig, O.E. (2012) 'A systematic approach to the recovery and identification of starches from carbonised deposits on ceramic vessels'. *Journal of Archaeological Science*. 39 (12). 3,483-3,492

Shillito, L-M. (2011) 'Çatalhöyük: Neolithic diets and debris under the microscope'. *Current World Archaeology*. 47. Available at: world-archaeology.com/features/turkey-neolithic-life-at-catalhoyuk/ [Accessed 3rd May 2013]

Shillito, L-M., Matthews, W., Bull, I.D. and Almond, M.J. (2011) 'The microstratigraphy of middens: Capturing daily routine in rubbish at Neolithic Çatalhöyük, Turkey'. *Antiquity*. 85 (329). 1,024-1,038

Shillito, L-M. and Ryan, P. (in press) 'Surfaces and streets: Phytoliths, micromorphology and changing use of space at Neolithic Çatalhöyük (Turkey)'. *Antiquity*

Weiner, S. (2010) *Microarchaeology: Beyond the Visible Archaeological Record*. Cambridge: Cambridge University Press



Celebrating 150 years of promoting the study of Yorkshire's past

Kirsty McHugh¹

¹Yorkshire Archaeological Society (archivist), Claremont, 23 Clarendon Road, Leeds, LS2 9NZ Email: yas.archives@gmail.com

This year the Yorkshire Archaeological Society (YAS) celebrates its achievements over 150 years. The YAS exists to promote the study of Yorkshire's past. It was founded in 1863 (as the Huddersfield Archaeological and Topographical Association) to promote interest in the history and archaeology of the Huddersfield area. In 1870 it expanded its interest to cover the whole of Yorkshire, and today it is the main society in this field for the historic county and is based in Leeds, West Yorkshire.

The Society has always been a broader historical society rather than one strictly concerned with archaeology in its modern sense. Its interests and activities are broad, including lectures, excursions, publishing, and providing access to extensive library and archive collections (Figure 1). Within the Society, specialist groups arrange their own programmes of events and lectures on family, industrial (Figure 2) and medieval history, as well as Roman antiquities and prehistory.



Figures 1-2 (L-R): A heraldic manuscript from the YAS archives on display at Leeds City Museum; a walk around Leeds guided by the YAS industrial history section (Image Copyright: Yorkshire Archaeological Society)

Throughout its history, the Society has been active in publishing articles on many aspects of the past of Yorkshire and transcripts of important Yorkshire records. The *Yorkshire Archaeological Journal* was first published in 1869, and the Record Series initiated in 1884. The YAS also publishes material on the history and archaeology of Yorkshire in its Occasional Papers and Archaeological Reports series. In addition, it has publications dedicated to transcripts of Yorkshire parish registers and the Wakefield Manor Court Rolls.

The YAS library collection of around 45,000 works is probably the largest single resource, outside the British Library, for research on the past of Yorkshire. Its archive collections mainly comprise of deeds, estate and manorial archives and antiquarians papers and contain collections of local and national significance.

This year, in addition to its ordinary programme of events, the Society has arranged a number of new and exciting initiatives, including day schools, a community excavation (Figure 3) and exhibitions. Full details of all the anniversary events are available on the YAS website at www.yas.org.uk.



Figure 3: A community excavation on the lawn outside the YAS headquarters in Leeds held in association with the WEA Digability Project (Image Copyright: Yorkshire Archaeological Society)

The Society has a small paid staff to administer access to its collections; however, it relies heavily on volunteers. If you would like to get involved with the Society by becoming a member, contributing to one of the publishing series, volunteering, or supporting the YAS in some other way, please get in touch via yas.enquiries@gmail.com.

Submissions information

The full information for contributors, including submission rules and copyright, is available on *The Post Hole* website, at:

http://www.theposthole.org/authors

Submission deadlines

The Post Hole releases eight issues per academic year on a **monthly** basic between October and July. The submissions deadline for all of *The Post Hole*'s monthly issues is the **final Wednesday** of the preceding month.

Submission length

Articles of any length **up to 2,500 words** are welcome, though keeping below 2,000 words is preferable.

Figures

Photographs, graphs, plans and other images are also welcome as they usually help illustrate the content of submissions. All images should be submitted separately to any documents (i.e. not embedded in text, but sent to *The Post Hole* as attachments.

It is preferable that photographs are submitted in **.jpg format**, and graphs, plans and other linear images are submitted in **.png format**. Please contact the Submissions Editor if you are unsure about image formats or anything else regarding your submission.

How to submit

All submissions should be sent to *The Post Hole* Submissions Editor, Alison Tuffnell, by email (submissions@theposthole.org).

The Post Hole may in the near future establish an online submissions system on its website. Details will be released about this should it happen. Submissions by email will continue as normal.

Back cover: Ruins of Bunce Slave Fort, Sierra Leone (Image Copyright: Andrew Marriott)

The Post Hole is an archaeology journal run by students at the University of York (UK). It publishes articles on a wide range of archaeological topics, from prehistory to the present day, giving readers the latest news, research and events in the world of archaeology.

Issues are released via our website at the start of each month and are available to anyone. If you are interested in writing for *The Post Hole*, you can read information for contributors on our website, or contact us (submissions@theposthole.org).

The Post Hole was established in 2008 and since then has become the premier student-run archaeology journal in the UK. The journal has a diverse audience which continues to grow with the recent redevelopment of its website and new social media presence.

Additionally, hard copies of issues are printed for students and academics in a number of university departments across the UK. Please contact us if you are interested in receiving hard copies of issues.

Follow The Post Hole online, www.theposthole.org http://goo.gl/ZELcI http://goo.gl/mwAV8 ttp://goo.gl/sE5cT

