

Chapter 1

MUSEUMS AND ARCHAEOLOGY: PRINCIPLES, PRACTICE, AND DEBATES

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This chapter is intended to provide readers with an overview of the key contemporary principles, practices, and debates relating to museum archaeology. By highlighting a series of questions, it encourages readers to adopt a critical perspective and to use this in their own evaluations of museum theory and work. And, by referring to a significant sample of the professional and academic literature on museum archaeology, it offers not only an introduction to the chapters selected for inclusion in this Reader but also the chance to explore an even wider body of relevant literature.

The focus in this introduction, and throughout the Reader, is on present-day museum archaeology, including its development since the 1970s. Over this period, there has been a clear shift in museums from servicing the needs of archaeologists to serving diverse publics in more dynamic and sustainable ways. There exists, however, an extensive literature on the earlier history of antiquarian and archaeological collecting, dedicated to themes ranging from colonialism and nationalism to classical art and aesthetics (e.g. Leospo 1984; Gilberg 1987; Mitchell 1988; Wilson 1989; Jenkins 1992; Beard 1993; Broschi 1994; Masry 1994; Hebditch 1996; Kristiansen 1996; Wright 1996; Guha-Thakurta 1997; Crawley 1998; Errington 1998: 161-187; St. Clair 1998; Kurtz 2000; Skeates 2000, 2005; Crooke 2001; Jenkins 2001; Browman 2002; Shaw 2003; Tahan 2004, 2005; Moser 2006; Whitehead 2009; Cheape 2010; Garrigan 2012; Quirke 2012; ter Keurs 2011; Savino 2015; and numerous articles in the *Journal of the History of Collections*) — an awareness of which is certainly important when trying to understand the causes of some of the logistical and political challenges facing museum archaeology around the world today. As Hedley Swain (2007) has pointed out, for example, museum displays of cultural remains appropriated by representatives of former colonial powers can still perpetuate politically-biased views of ancient civilizations as well as hero-myths about early archaeologists.

In what follows, three main areas — archaeological collections; archaeology, ethics, and the law; and interpreting the archaeological past — and a variety of sub-themes are covered, following the same order and headings as those used to structure the other chapters in this Reader.

Archaeological collections

Curation of archaeological remains: responses to crisis

What are the key principles of archaeological collections management? Is there a crisis in the curation of archaeological collections? How are museum archaeologists responding?

The key principles of good archaeological collections management are now well established (e.g. Museums and Galleries Commission 1992; Sullivan 1992; Sullivan and Childs 2003: 59-77 – **Chapter 2**). The first step is acquisition. This refers to the formal process of adding a set of objects to a collection. Museums and other repositories should agree and follow acquisition policies, and they should aim to obtain legal title to the objects that they acquire. The next step is accessioning, involving assigning an accession number and entering basic information for each object into an accessions register, including an assessment of the object's physical condition. Cataloguing follows on from this. It means gathering together all the primary information known about each object, including details of its provenance. Objects then need to be prepared for storage, and for possible research, exhibition, and loan. This includes being labelled, being assessed for conservation treatment, and being tracked via inventories. Strategic decisions have to be taken where objects and associated records are to be stored, taking account of access requirements and restrictions (notably over the handling and storage of human remains), environmental standards, and security. Deaccessioning and disposal – deciding to, then physically removing, objects from a collection – are also legitimate, if unusual, steps in collections management. In such cases, strenuous efforts should be made to transfer the objects through donation or exchange to responsible new owners (in contrast, for example, to sale on the open market to raise funds). All of these principles are

intended to facilitate the controlled use of archaeological collections by a variety of people, whilst maintaining their safety and long-term preservation.

But museum principles and practice do not always neatly overlap. This has become increasingly evident since the mid-1970s, when a series of archaeological curation problems (labelled as ‘the curation crisis’) surfaced in the USA and elsewhere (e.g. Christenson 1979; Childs 1995, 2006; Kusimba 1996; Bustard 2000 – **Chapter 3**; Thompson 2000; Lyons et al. 2006). Ongoing issues include: large backlogs of uncatalogued collections; extensive archives from recent cultural resources management/developer-funded projects; inadequate museum staffing (and training); increasing curation fees; substandard, overflowing, dispersed, and unsafe storage facilities; limited public access to archaeological collections; and a lack of awareness of these problems amongst the wider archaeological community. Solutions do exist, but funding (which is a constant challenge) underpins almost all of them (Nash & O’Malley 2012). Engaging with the tax-paying public is essential, and digitization and on-line access to museum documentation is certainly one way forward towards more effective and accountable collections management. However, preserving and sharing digital data bring their own significant set of issues. State-of-the-art archaeological research and curation centres are a curator’s dream, but usually remain so. As a consequence, despite a long-lived professional assumption that museum collections should be curated ‘in perpetuity,’ deaccessioning and disposal cannot now be rejected out of hand, although the process has to be managed very carefully.

Given these challenges, Trimble and Marino (2003) go so far as to state that good collections management is an ethical responsibility of museum and field archaeologists. They define ethics in this context as being about making sound professional choices that benefit the long-term care and use of archaeological collections. On one level, before archaeological fieldwork begins, good curation planning is important, including the pursuit of rigorous sampling strategies. On another level, the physical and administrative infrastructure of curation facilities needs to be reviewed — critically and from a long-term perspective. Dynamic fund-raising and outreach programmes are regarded as ways forward here. However, when

it comes to collections of culturally sensitive materials, other ethical stances are also relevant, as we shall see later on.

Archaeological archives: selection, retention, use, and disposal

Should archaeologists keep everything they find? Can the long-term museum storage and care of (often large) archaeological excavation archives be justified? Who should pay for such storage? How can better use be made of archaeological archives? Should some of this material be disposed of, and if so how?

Archaeological archives comprise finds, environmental samples, paper, photographic, and digital records, and other material arising from archaeological field- and laboratory-work and passed to museums for long-term curation after their primary study and publication. This flow of material has a long and sometimes chequered history, and, in order to promote closer working together of museum and field archaeologists, and to assist museum staff in planning for the care and use of archaeological archives, successive reports, recommendations, and guidelines have been produced (e.g., for the UK, White 1986; Wingfield 1993; Owen 1995; Swain 1998; Perrin 2002). Nevertheless, problems have continued. The traditional archaeological justification for retaining such archives is that they comprise a priceless residue of ‘our’ archaeological heritage, resulting from public- or developer-funded fieldwork at now largely destroyed archaeological sites, with the potential to be of research or educational value in the future. However, in an economic climate of shrinking budgets and storage space, hard decisions still need to be made about the future of archaeological archives (Sonderman 1996 – **Chapter 4**).

Nick Merriman and Hedley Swain’s (1999 – **Chapter 5**) response to the growing problems faced by the curators of often neglected archaeological archives in England in the 1990s (e.g. Swain 1996) was, on the one hand, to remind scholars of their research potential, and, on the other hand, to offer suggestions as to how they might be made more accessible for the benefit of the wider public. Providing on-line access to digitized museum catalogues and collections was seen as an important first step. The Museum of London’s ‘London Archaeological Archive and Research Centre’ has since been regarded as a model of good practice (Swain 2006 – **Chapter**

6). The Centre, which cares for the archives of some 5,200 archaeological excavations in London, hosts the Central London Young Archaeologists Club for children and teenagers, provides loans boxes of Roman material for London schools (see below), and offers the public weekend events such as a re-created excavation using real artefacts, themed ‘behind-the-scenes’ tours, and volunteer opportunities. However, according to a recent survey of museums holding archaeological archives across England, many of the old problems remain at a local level, including lack of storage space, geographical gaps in the collecting areas of museums, under-staffing, and limited public awareness and use of the archives (Edwards 2012).

Documentation, identification, and authentication of archaeological collections

How should archaeological collections be documented? What range of terms should be used to describe archaeological remains? How can fakes be identified?

Good documentation is essential to the effective management of museum collections of archaeological material, whether it be newly acquired, on display, in store, under study and conservation, or on loan. Widely shared (even ‘universal’) documentation standards are ideal — one example being SPECTRUM: The UK Museum Documentation Standard (e.g. Longworth 1998; Longworth and Wood 2000). This approach is particularly relevant to large and widely dispersed collections — notably of Egyptian antiquities, acquired in large quantities, dispersed around the museums of the world, and catalogued in a variety of languages and databases (Saleh 1992). However, local solutions that meet the needs of specific collections and organisations are also necessary. One example is provided by the computerized inventory system devised by staff at Laténium — the Archaeological Museum in Neuchâtel, Switzerland — to cope with the voluminous and varied excavation and field-survey archives from the surrounding canton (Vaudou 2004 – **Chapter 7**; see also Kaeser 2009). To ensure the smooth transfer of archaeological archives from field to repository, the systematic entry of data, and easy access to them, a thesaurus of standard words is shared by excavation and museum staff, a very structured and straightforward form is used for recording objects, and a single index is maintained (as opposed to separate indexes according to archaeological period).

However, despite the knowledge and experience of museum documentation staff, not all archaeological materials are easy to identify correctly, particularly by eye. As a consequence, in the case of ancient marbles, for example, a combination of scientific analyses can help to differentiate between authentic pieces and forgeries (Polikreti 2007). The patina of marble can be investigated using techniques such as optical microscopy, the stone's provenance (quarry) can be identified using a range of physical and geochemical techniques, the freshness of working and breaks can be evaluated under ultraviolet light, and the 'burial age' or length of time an object has been exposed to sunlight can be calculated using thermoluminescence. Not surprisingly, there are advantages and limitations to all of these techniques, and their results are not always conclusive. The same is true of techniques used in the authentication of other archaeological materials, such as ancient bronze artefacts (Robbiola and Portier 2006).

Museum care, conservation, and restoration of archaeological objects

What are the optimum conditions for the care of archaeological collections? What are the consequences of conservation work on archaeological objects? Are minimum intervention and reversibility practicable guiding principles for archaeological conservation work? In what circumstances are conservators justified in seeking to restore to an earlier stage the appearance of an archaeological object?

Despite the existence of clearly-defined standards and guidelines for curation and conservation (e.g. Museums and Galleries Commission 1992), not all archaeological collections receive adequate care. For example, China's world-famous terracotta warriors, displayed to large numbers of visitors in the Museum of Qin Terracotta Warriors and Horses near Xi'an, have been discoloured and eroded by air pollution (characterised by high concentrations of acidic aerosols) — the impact of which is particularly high in the summer season when the temperature can reach 30 degrees Centigrade and relative humidity 70 per cent (Cao et al. 2005; Hu et al. 2009). Evidently, the active and long-term involvement of conservators is essential here to establish, monitor, and maintain appropriate environmental controls. More recently, significant negative media attention was generated when it emerged that museum staff at the Egyptian Museum in Cairo had hastily and irreversibly glued back

Tutankhamun's beard with epoxy when his gold burial mask was damaged during cleaning (BBC 2015).

The common purpose of conservators is to prolong the life-span of an object, even though it is not possible to halt the deterioration process completely. But, in practice, conservators are faced with an overlapping array of choices of treatment, ranging from initial investigative work to establish the nature of the object, to preventive treatment and care involving the removal of damaging materials, the consolidation of remaining materials and the establishment of environmental controls to prevent further disintegration, to remedial treatment to repair or support a fragile object, to more interventive cleaning and restoration of the object's shape and appearance (Pye 2000 – **Chapter 8**). Much depends on the actual material (for example, archaeological bronzes are easier to conserve than archaeological iron), the perceived future uses of the object (for study, teaching, or display), and of course the funding available. Caution is essential and debate inevitable.

A particularly controversial archaeological example is provided by the restoration of the Bush Barrow lozenge plate (Kinnes et al. 1988). This object comprises one of a group of finely decorated gold objects excavated from a Bronze Age burial mound near Stonehenge, and is owned by the Wiltshire Archaeological and Natural History Society. For the purposes of museum handling and display, it was restored whilst on loan to the British Museum (without the permission of the owners), initially by removing the creases and indentations on the face, but then – more profoundly – by modifying its shape from a flattened state to a deduced 'original' gently domed, profile and by polishing its surface. This irreversible restoration has been challenged on both scientific and ethical grounds (Shell and Robinson 1988; Corfield 1988).

A more creative solution to the care and display of a set of valuable archaeological objects is shown by the example of an Egyptian mummy and coffin owned by the Burke Museum of Natural History and Culture in Seattle, Washington (Phillips and Roundhill 2007 – **Chapter 9**). The coffin belongs to the Twenty-First Dynasty (2909-2839 BP) and the unrelated mummy to the Ptolomaic Period (2250-1980 BP). In the late 1990s, museum staff realised that both were in need of

conservation and a new protective environment. \$35,000 was successfully raised from the museum's community to design and build an environmentally stable and ethically sensitive storage and display case. A single case was produced with separately sealed compartments: the coffin is situated in the visible upper part in a stable environment, while the mummy and its cartonnage pieces are respectfully placed out of (but potentially in) view in an oxygen-free polyethylene bag in a drawer below.

Archaeology collections research

What is the research potential of old museum collections of archaeological objects? In what ways can new analytical techniques improve understanding of them? What do museum curators get out of archaeological scientists' work on their collections? How might members of the public participate in research on archaeological collections?

New research on old archaeological collections has the potential to transform our understanding of those objects and their wider archaeological contexts, and also to significantly enhance their appeal to the public (e.g. Chapman 1981; Saville 1994; Gaimster 2001). Given that museums generally have less resources to undertake this work themselves, partnerships with academics and the public can prove to be a productive way forward, particularly where research agendas and data are shared.

Take Gristhorpe Man, for example. This well-preserved Early Bronze Age log-coffin burial from North Yorkshire in the UK was excavated in the early 19th century and has since been housed in Scarborough Museum. The coffin contained a complete human skeleton accompanied by organic and inorganic grave goods. While the museum was undergoing major renovation, a large international team of archaeological scientists, led by Nigel Melton of Bradford University, used a wide range of modern analytical techniques to shed new light on the dating, diet, and provenance of the man (Melton et al. 2009 – **Chapter 10**). Osteoarchaeological study revealed that the man was relatively tall, physically active, and right-handed, while stable isotope measurements indicated that he spent his childhood in the Scarborough area, and that his nutritious diet was relatively high in meat. Healed fractures are suggestive of injuries sustained during martial exploits. CT scanning showed that, despite his healthy physique, he suffered from a slowly developing intra-cranial

tumour, which may have caused physical and behavioural impairment. Gas chromatography-mass spectrometry and stable isotope analysis confirmed that the black material contained in a vial was correctly labelled ‘brain’. Metallurgical analysis and the lead isotope ratios of the bronze dagger blade found with the body suggest that it was manufactured in Britain using recycled Irish metal. The dagger’s pommel was confirmed to be of rare whalebone. A combination of accelerator mass spectrometry, radiocarbon, and dendrochronological dating of the Gristhorpe assemblage gave a date for the skeleton of 2200-2020 BC, and indicate that the tree for the coffin was felled at around the same time (between 2115 and 2035 BC), but that the branches laid over the coffin were deposited at least 270 years after the death of Gristhorpe man – perhaps when the barrow was completed. Overall, these results support the hypothesis that the man was of chiefly status, born locally into an elite family, but linked to a wider social network via the sea. The new museum display is now helping to disseminate these research findings to the public.

A comparable example is provided by recent research on the famous Lewis Chessmen in the collection of the National Museums of Scotland (Tate et al. 2011 – **Chapter 11**). The surface condition of the museum’s collection of eleven of these pieces was examined using optical microscopy, X-ray fluorescence spectroscopy, and scanning electron microscopy, in order to find out more about the materials from which they were made and about their biographies — from their manufacture in the early medieval period through to their discovery in the 19th century. The results suggest that while the majority are of walrus ivory two of the pieces are of sperm whale tooth. Traces of cinnabar-derived mercury identified on the surface of individual pieces also suggest that they were originally decorated by red pigment.

In addition to projects like these where archaeological scientists undertake cutting-edge research on museum collections, the innovative MicroPasts project led by Andrew Bevan of University College London has used web-based, crowd-sourcing methods to allow academics and the public to co-produce large numbers of 3D models of artefacts, enhance existing archaeological databases, add rich new content to images, and micro-fund new collaboratively-developed research agendas. Working in partnership with the British Museum, project volunteers have, for example, helped to transcribe more than 30,000 handwritten catalogue cards dating back to the late 18th

century, and made digital photographs of thousands of ancient bronze artefacts so that they can be stitched together to form 3D images (Kennedy 2014). In return, the catalogue records and the images are freely available, without copyright restrictions, and so a replica of a bronze axe from Jevington housed in the British Museum has been printed out as a 3D plastic model in a public library in Washington DC during the course of an archaeology open day.

Archaeology, ethics, and the law

Legal and ethical dimensions of archaeological museum collecting and collections

What is the relationship between museum collecting and the licit and illicit trade in antiquities? How can museums practice due diligence when acquiring archaeological collections? What are the limitations to existing cultural property legislation?

Caution has been growing in museum archaeology towards the collecting of cultural material, especially since the late 1980s (e.g. Shestack 1989; Cook 1991; Gaimster 1993; Tubb 1995; O’Keefe 1997; Brodie et al. 2000; McIntosh et al. 2000). Although not all would agree that archaeologists should think of themselves as the absolute guardians of heritage (e.g. Boardman 2006), concern has centred on the legality and ethics of collecting cultural material that might have been destructively looted from archaeological sites and then illicitly traded (e.g. Tubb and Brodie 2001 – **Chapter 12**). In particular, concerns have been voiced by archaeologists and national heritage agencies over acquisitions of antiquities made by prestigious museums in Europe and the USA. For example, David Gill and Christopher Chippindale (Gill and Chippindale 1993; Chippindale and Gill 2000; c.f. Broodbank 1992) have documented the calamitous consequences of connoisseurs’ esteem for Classical art objects and prehistoric Cycladic marble figurines, which has driven their competitive private and public collecting, their illicit trading, the looting of archaeological sites and museums, the production of fakes, and a distortion of these objects’ contextual significance in past societies. Another particularly scandalous example is the J. Paul Getty Museum in Los Angeles, allegedly known in the Swiss antiquities trade as the ‘museum of the *tombaroli*’ (‘tomb-robbers’) (Watson and Todeschini 2006). Its former curator of antiquities, Marion True, was indicted by the Italian government in 2005,

along with the American antiquities dealer, Robert E. Hecht, for conspiracy to traffic in illicit antiquities, based on evidence from a police raid of the Geneva warehouse of an Italian art dealer, Giacomo Medici, who had acted as the middleman for items purchased by the Getty, including Etruscan bronzes and Greek vases illegally excavated and exported from Italy. True resigned from the museum the following year, complaining that she had been made the scapegoat for practices that were known and condoned by the Getty's Board of Directors.

Following a series of high-profile exposés of the sometimes close connection between museums and the illicit trade in antiquities, museum archaeologists are now much more aware of their legal obligations and ethical responsibilities when collecting archaeological materials. In particular, they pay closer attention to the claimed provenance and recent histories of potential archaeological acquisitions, to ensure that they have not been illegally looted, exported, and sold. They are also making new efforts to educate their publics as to the destructive effects of the illicit trade in antiquities (e.g. Argyropoulos et al. 2014). In the UK, this new attitude has been codified in guidelines produced by the government's Cultural Property Unit (DCMS 2005a). These state that museums should reject an item offered to them for acquisition or loan if there is any suspicion about it, or about the circumstances surrounding it, after checking that it was not illegally excavated or exported since 1970 (the date UNESCO adopted the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Cultural Property). More specifically, it describes the process of 'due diligence'. This involves examining the object, considering its type and likely place of origin, taking expert advice, determining whether the item was lawfully exported to the UK, and evaluating the account given by the vendor or donor. These worthy principles were described as 'daunting and difficult' in practice by Paul Roberts, Curator of Roman Art and Archaeology at the British Museum, although he remained upbeat about the likelihood of the Museum continuing to add to its archaeological collections for the purposes of display and research (Roberts 2006: 60). In the USA, a law and ethics revolution pertaining to museums' acquisitions of antiquities can also be claimed to have taken place, with both the Association of Art Museum Directors and the American Association of Museums adopting new ethics guidelines for acquisitions of ancient art and archaeological material (Kreder 2010 – **Chapter 13**). However, still

fearing the loss of important unprovenanced archaeological objects to private collections, their guidelines intentionally leave loopholes for museums to use ‘informed judgement’ when the complete documented ownership history of a work is unavailable. A comparable tension exists in Norway, where museum staff have been criticised for legitimating unlawful metal detecting by praising metal detector users who hand in objects to them (Munch Rasmussen 2014).

Despite this tightening up of the legal and ethical dimensions of museum acquisitions in Europe and the USA, the looting of national museums during recent and on-going wars in the Arab world highlights the continued value and vulnerability of cultural property in ‘source’ countries. For example, in 2003, following the U.S. invasion of Iraq and the chaotic fall of Baghdad, the inadequately protected National Museum in Baghdad was looted by Iraqi civilians, resulting in the loss of thousands of artworks and artefacts. One of the most valuable pieces was a headless stone statue of the Sumerian King Entemena; it was eventually recovered in the United States and restituted to Iraq. Upon reflection, it became clear that UNESCO’s widely ratified 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict did not explicitly contemplate civilian looting (as opposed to state-sponsored looting and destruction) and therefore does not address responsibility for preventing civilian looting (Paroff 2004; c.f. Stone and Farchakh Bajjaly 2011). However, this has been partly addressed in the Second Protocol to the 1954 Hague Convention, which entered into force in 2004. Nevertheless, museums and their collections will never be entirely safe in times of war. Indeed, in Syria, at the time of writing, museums and archaeological sites are being actively targeted, looted, and destroyed.

Repatriation and reburial of archaeological museum collections

How is ‘ownership’ understood by different interest groups? What is repatriation? How should museums respond to repatriation requests? What impact have repatriation requests had on museums and their collections around the world? What should be done with unprovenanced ancestral remains held in museums?

Repatriation is traditionally defined as returning a person to their place of origin. However, in the museum context, it has come to refer to the return of an item

of cultural patrimony from a museum collection to a party found to be its true owner or traditional guardian, or their heir and descendants. As such, the act of repatriation can also be understood as an act of reparation – making amends for a wrong done, often by members of former colonial powers (Greenfield 2007).

In Australia, systematic repatriation of Australian Aboriginal and Torres Strait Islander artefacts and human remains began in the 1970s, in response to growing Aboriginal political activism, and, despite resistance from anthropologists and archaeologists, is now actively pursued by Australian governments and cultural institutions as a matter of policy (e.g. Turnbull 2002; Green and Gordon 2010 – **Chapter 14**). Perhaps the best known, and most archaeologically contentious, example was the repatriation and reburial of human remains excavated at the Kow Swamp late Pleistocene burial site in central Victoria, dating back to at least 15,000 years ago, and arguably unrelated to modern Aboriginal populations. These were returned by the Government of Victoria in 1990 at the request of the Yorta Yorta Aboriginal community. However, casts of some of the Kow Swamp skulls and mandibles have been retained by museums. Today, negotiation between museums and Aboriginal communities, and repatriation on request of ancestral remains and secret-sacred objects, are enshrined in the policy of Museums Australia – Australia's national museums association. But the large number of effectively unprovenanced ancestral remains still held in Australian museums represents an unresolved problem.

In the USA, repatriation is now closely associated with the Native American Graves Protection and Repatriation Act (NAGPRA). This was enacted in 1990, following two decades of campaigning by the Native American human rights (and associated burial rights) movement. The legislation confirmed Indigenous ownership or control over native cultural items discovered on federal and tribal lands, criminalised trafficking in Native American human remains, and established a process of repatriation of material from museums and federal agencies to Native groups. Museums have consequently been obliged to compile detailed inventories of Native American remains and cultural items in their possession, and to return any material to a claimant that has established the requisite link of linear descendancy, cultural affiliation, or ownership or control. It has also required museums to consult and collaborate with Native groups: to classify objects correctly and – where possible –

determine their cultural affiliation. In practice, tensions have arisen over definitions of ‘cultural affiliation’, what to do with nearly 119,000 sets of ‘culturally unidentifiable human remains’, the level of scientific documentation to be undertaken, and the amount of time and work involved (e.g. Nafziger and Dobkins 1999 – **Chapter 15**; Killion 2008; Daehnke and Lonetree 2010). The experience of Harvard University’s Peabody Museum of Archaeology and Ethnology offers a good example of some of these issues (Isaac 2002). But positive relations between museums and Native American communities have often been established through the restitution process. It is also worth noting that not all Native American items have been restituted, nor all restituted items reburied – some being left in the care of the original museums for the educational benefit of tribal members and non-tribal researchers, many receiving more culturally sensitive care through the incorporation of indigenous curation methods, and some gaining greater visibility as part of new tribal museum collections.

In the UK, official guidelines for good practice in responding to requests for restitution and repatriation of cultural property were published by the former Museums and Galleries Commission (Legget 2000) – the Government’s advisory body for museums – and have since been widely adopted as part of museums’ collections management policies. When considering a request, fourteen key steps to consider are usefully defined: acknowledging the request, delegating the preparation of the response to one person, informing the museums’ governing body of the request, clarifying the status of those making the request, contacting other museums to establish if they have received similar requests, understanding the reasons behind the request, gauging the cultural and religious importance of the material, checking the status and condition of the material, checking the acquisition history of the material, referring to current museum policies, considering professional ethical concerns, checking international legislation and conventions, and considering the proposed future of the material if returned. However, it is worth noting that such requests are relatively rare in the UK, and generally relate to material in ethnographic or fine art collections – one classic archaeological exception being the Parthenon Marbles, held by the British Museum since the early 19th century (St. Clair 1998), against Greek politicians’ wishes, who have optimistically reserved space for them in the New Acropolis Museum (to which we will return below).

Another way forward in the repatriation debate can be found in a change of attitude towards collections mobility, encapsulated in a report published by the UK Museums Association entitled *Collections for the Future* (Museums Association 2005). Essentially, the report recommended that museums (including national museums) develop more partnerships with each other, and that they share — to a much greater extent — collections, expertise, and skills. This new dynamic attitude has played a significant part in responding to, and mitigating demands for, the repatriation of Scottish cultural artefacts from English and Scottish national museums. A good example is provided by the Lewis Chessmen (already mentioned above). Of the 93 pieces known to us today, 82 are held by the British Museum (BM) and 11 by the National Museum of Scotland (NMS). They are an iconic set of objects within the British Museum's collection, and an extensive range of Lewis Chessmen merchandise features prominently in the Museum's shop. The Celtic League, an independent pressure group championing the cultural rights of the indigenous people of Scotland and other Celtic regions has been calling for the restitution of the Lewis Chessmen and other Celtic artefacts for a number of years. Their cause was boosted in 2007 when Alex Salmond, the then leader of the Scottish National Party and First Minister, began arguing for their return to an independent Scotland. Local politicians and campaigners on the Isle of Lewis responded by stating that they would certainly like some of the pieces back, particularly to help boost their tourist industry. In the context of the Museums Association's recommendations and this political debate, in 2010 and 2011 the British Museum worked in partnership with National Museums Scotland, and with funding from the Scottish Government, to lay on the largest travelling exhibition to date (involving 30 of the chessmen — 24 from the BM and 6 from the NMS). The exhibition opened at the National Museum in Edinburgh, then toured to Aberdeen Art Gallery, Shetland Museum and Archives, and the Western Isles Museum in Stornoway. In this way, a diplomatic solution was sought in which these special objects could be kept 'alive' and relevant to the modern world by being kept circulating in the public domain, while sidestepping the entrenched issue of all-out transfer of ownership. The British Museum was, anyway, not inexperienced in politically sensitive negotiations, having, for example, previously hosted a blockbuster exhibition of the terracotta warriors — which remain highly visible symbols of Chinese cultural diplomacy (Feuchtwang 2011).

Museums and the care and display of ancient human remains

What archaeological human remains might be retained by museums? How should these remains be treated? Should they be displayed? And who should decide?

The care and display of ancient human remains in museums has been the subject of enduring and heated debate between researchers, museum curators, and descendent communities, all of whom have asserted claims for access or control based upon their different perspectives (e.g. Lohman 2012; Giesen 2013). This debate has been particularly intense in the USA, where it led to the enactment of NAGPRA. This has had significant consequences for federally-funded museums holding collections of Native American and Native Hawaiian human remains and other cultural items (McManamon 2006 – **Chapter 16**). Leaving aside repatriation (discussed above), NAGPRA and its associated regulations require federal officials to ensure that retained collections of human remains are preserved and made available for scientific, educational, and religious uses, although recognised tribes with demonstrable cultural affiliation to the remains are generally allowed to control access to them. Public agencies and museums have also established their own policies concerning research on, and display of, human remains from archaeological contexts in their collections. In general, they allow study of human remains by qualified researchers, including destructive analysis, subject to review of a detailed research proposal and to consultation with traditionally associated peoples. By contrast, they do not allow the public display of Native American human remains and photographs of them, in order to avoid causing offense and distress to Native American people. Human remains of individuals from other ethnic groups are occasionally displayed, but only after careful consideration.

Debate over the appropriate treatment of human remains in museums has also been growing in the rather different political context of the UK (e.g. Swain 2002; Curtis 2003; Giesen 2013). In response to the Australian government's request for the UK to increase efforts to repatriate human remains to Australian Indigenous communities, the UK Government's Department of Culture, Media and Sport (DCMS) published guidance for the care of human remains in museums, including procedural guidance on the return of human remains (DCMS 2005b). The report

acknowledges that, ‘The vast majority of work on human remains held by museums in the United Kingdom is uncontroversial and has wide popular and academic support.’ (p. 8). In other words, most visitors ‘trust’ museums to be professional in how they treat human remains (Kilmister 2003). But the DCMS also recommends that museums should always have a clear understanding as to why they are holding human remains, should store those remains in a designated area, treat them with dignity and respect, display them only when their presence makes a material contribution to a particular interpretation, and in such a way as to avoid visitors coming across them unawares.

Some UK museum archaeologists have since encouraged debate over the question of whether or not human remains should be displayed in museums, and have experimented with the redisplay of previously uncontested human remains (Alberti et al. 2009; Jenkins 2011 – **Chapter 17**). This has been stimulated by the international debate, by the controversial ‘Bodyworlds’ travelling exhibition of plastinated human bodies stripped down to reveal their inner anatomical structures, and by national outrage over Alder Hey hospital’s removal of organs from the bodies of deceased children without their families’ consent. Set in the context of this debate, a temporary exhibition held between 2008 and 2009 at Manchester Museum focussed on Lindow Man, a well-preserved Iron Age bog-body found near Manchester, and invited a range of stakeholders (including curators, archaeologists, Pagans, and local people) to contribute to an inclusive and respectful exhibition that presented multiple views of Lindow Man in the light of present-day concerns. (The design of, and audience responses to, this exhibition are returned to below.) This contrasted with previous exhibitions of Lindow Man in the British Museum, which drew primarily upon archaeological research to interpret the man’s life and death in the past (e.g. Stead et al. 1986). At the same time, Manchester Museum took the decision to cover up three unwrapped Egyptian mummies with white sheets, in order to raise questions through public consultation about the most respectful and appropriate way for the museum to display human remains. However, this strategy provoked a strongly negative public and professional reaction, to which the museum responded by uncovering some of the mummies.

Interpreting the archaeological past

Critical and political perspectives on museum representations of the archaeological past and of archaeology

Museum displays have been critically evaluated by visitors for longer than we might imagine. D.H. Lawrence, for example, in his book about Etruscan places, wrote: ‘Museum, museums, museums, object-lessons rigged out to illustrate the unsound theories of archaeologists, crazy attempts to co-ordinate and get into a fixed order that which has no fixed order and will not be co-ordinated! It is sickening!’ (Lawrence 1932: 185). However, it was in the late 1980s and early 1990s, as part of a broader intellectual revolution informed by critical theory, that an alliance of scholars and other commentators began to question many aspects of the museum institution, with the goal of establishing a ‘new museology’ (Vergo 1989). Particular attention was paid to the conventions used to represent the past in museum displays, whose orders were found to be far from politically neutral. This led to a fundamental question: how objective can and should museum displays about the past be?

In archaeology, Michael Shanks and Christopher Tilley (1987a; 1987b) led the charge, challenging the archaeological orthodoxy with a new brand of social theory which promoted a self-reflexive, critical, and political archaeology that linked the past to the present. This radical manifesto extended to museum representations of archaeological collections and of archaeological work (Shanks and Tilley 1993: 68-99 – **Chapter 18**). Their key argument was that museums can misrepresent the past: distorting it through processes of selection and classification, objectification and aestheticization, revelation and signification — processes through which archaeological artefacts are ultimately turned into ahistorical commodities and visitors into voyeuristic consumers. They also deconstructed the presentation at the Jorvik Viking Centre in York of ‘the archaeologist as hero’, in which archaeologists are portrayed as industrious scientific experts discovering truths about the past. Reacting against established modes of museum representation, Shanks and Tilley proposed a new interpretative agenda to redeem museum archaeology — one that would embrace heterogeneity, difference, contradiction, discontinuity, and conflict. More specifically, they argued that: (1) to reflexively acknowledge how the past may be manipulated and misrepresented for present-day purposes, political content should be introduced into conventional displays; (2) to acknowledge that artefacts’ meanings change

according to their specific engagements with the present, artefacts should be reordered and juxtaposed together with contemporary objects; (3) to emphasize that historical authorship is a dynamic, incomplete work-in-progress, impermanent displays should be produced; and (4) to democratize historical authorship, communities should be allowed to construct their own pasts in the museum and to use artefacts outside the institutional space of the museum.

This critical agenda had a significant impact on museum archaeology, particularly within the UK (e.g. Owen 1996; Merriman 1999, 2000). This was evident, for example, in texts accompanying exhibitions of prehistoric material in England and Scotland developed in the 1990s (Skeates 2002 – **Chapter 19**). Analysis of information panels and artefact labels revealed a curatorial shift away from using museum text as an authoritative aid to education and communication towards the expression of more critically-aware and easy-to-read curatorial messages. For example, the re-display of the Alexander Keiller Museum (Stone 2004), discussed below, and the new display of the Kilmartin House Museum of Ancient Culture (which, incidentally, won the Scottish Museum of the Year and the Gulbenkian Prize for Museums and Galleries) (Heywood 2000) were testimony to a theoretically-informed desire shared by members of a new generation of museum professionals to de-construct and re-construct archaeology.

But the most contentious example was the ‘People before London’ prehistory gallery in the Museum of London, opened in 1994 and closed prematurely in 2000 (Cotton and Wood 1996; Merriman 1996; Wood 1996; Cotton 1997; c.f. Merriman 1997 on the Museum of London’s comparable ‘Peopling of London’ project). Front-end visitor studies revealed the restricted prior knowledge of audiences, who often equated ‘prehistoric’ with ‘dinosaurs’, and their preference for large images over text. At the same time, Shanks and Tilley’s radical proposals were explicitly taken into account by the curators, who introduced a degree of political content into the displays, juxtaposed archaeological artefacts with contemporary objects, emphasized authorship and the historical contingency of archaeological interpretations, and encouraged visitors to construct their own pasts in the museum. For example, the first text panel in the gallery, signed by the curators, asked visitors, ‘Can you believe what we say?’, and also acknowledged that green and gender issues had been given

prominence in the display, while the final panel asked, ‘Now what does prehistory mean to you?’ Although there were some dissenters amongst more conservative visitors and commentators, who accused the curators of political correctness, academic relativism, distasteful over-personalisation, and the dumbing-down of culture, summative evaluation indicated that most visitors appreciated this new approach. Nevertheless, this example also exposes a fundamental flaw in Shanks and Tilley’s agenda: unequal relations of power were still inherent in the display, whose curators still spoke for the past and manipulated the visitor, ultimately establishing a new form of curatorial authority — one that was more subtly masked by written admissions of bias and offers of democratic learning.

It is worth adding that not all museum archaeologists in the UK adopted Shanks and Tilley’s approach in the 1990s or have done so since then. This is especially the case with curatorial staff based in the national museums, where scholarly allegiance to their vast archaeological collections has traditionally been an important priority. For example, the ‘Early Peoples’ gallery in the National Museum of Scotland is dominated by artefacts from the museum’s rich archaeological collections, complemented by specially-commissioned contemporary artworks, and accompanied by texts that reassert an anonymous curatorial authority to communicate and educate – albeit in engaging, poetic language (Clarke 1996, 1998, 2000; Ascherson 2000). Furthermore, according to Mark Copley’s (2010 – **Chapter 20**) survey of 62 curatorial staff responsible for archaeology exhibits in the UK, most staff, even if not generally trained as scientists, are largely supportive of the UK Government’s strategy to enhance the public understanding of science and of current scientific research (ranging in archaeology from dating techniques to palaeopathology). The same is probably true in the USA, where, for example, a temporary exhibition in 2001 at the Science Museum of Minnesota focussed on science as a social process exemplified by the ongoing archaeological research at the Neolithic site of Çatalhöyük in Turkey, as part of a broader strategy to advance the public understanding of science funded by the National Science Foundation (Pohlman 2004).

Nevertheless, since the late 1990s, the critiquing of museum representations of the archaeological past has become more mainstream in academic archaeology, both

within and beyond the UK. Shanks and Tilley's ground-breaking ideas may be less explicitly acknowledged in the large body of literature in this area, but their impact continues to be felt in archaeological museology (i.e. the study of the history, theory, and practice of museums), if less so in museum practice.

Museum displays of human origins, for example, have been critically appraised by Stephanie Moser (2003), along similar lines to those proposed by Shanks and Tilley (c.f. Scott 2007). Moser argues that, in the twentieth century, such visual displays created a highly formulaic and restrictive account of human evolution. Life-size dioramas in particular represented our early ancestors as 'primitive', with slouched and hairy bodies, recurrently associated with clubs, animal skins, and caves. As an alternative to this display canon, Moser calls for new displays of human origins that: (1) challenge the associations that are still made between our hominid ancestors and modern black African peoples; (2) challenge the traditional 'cave-man' iconography of human evolution; (3) replace the traditional narrative of unilinear and sequential evolutionary progress with combined chronological and thematic exhibits; (4) tell new stories – for example, about socializing or the preoccupations of juvenile hominids; and (5) harness the emotional power of empathy and humour to communicate with visitors.

The variable representation of Saami (Lapp) prehistory and identity in museums in Sweden, Finland, and Norway has been thoughtfully evaluated by Janet Levy (2006 – **Chapter 21**). In particular, she has identified ideology-based contrasts between messages expressed by Scandinavian national and regional museums and by indigenous Saami community museums, particularly in the context of political tensions over claims to land and resources in Lapland. In the national and regional museums, an authoritative view of Scandinavian antiquity is presented, from which the Saami are largely marginalised. By contrast, in the Saami community museums, Saami history and culture are closely tied to the natural setting and climate of Lapland, and the time depth of Saami occupation is emphasized. Levy acknowledges the interpretative problems presented by both kinds of museum display, but, rather than calling for the de-politicization of archaeology, she acknowledges that representations of the past are inevitably political.

Persuasive critiques of gender and age bias in traditional archaeological museum exhibitions have also been published. For example, back in the 1990s Vivienne Holgate (1996: 85) noted that in museum displays about Roman Britain women were ‘shown performing stereotypical tasks in domestic situations, such as food production, food preparation and looking after children.’ And in Greek museums Dimitra Kokkinidou and Marianna Nikolaidou (2000) have argued that women have tended to be represented as passive or ambiguous participants in history, while female archaeologists have been rendered invisible, by displays that reflect the deep-rooted scholarly male chauvinism in Greek archaeology. As a consequence of such critiques some progress has been made in recent years over the museum representation of women in archaeology displays. However, Annika Bünz (2012 – **Chapter 22**) argues that further changes need to be made in order to achieve complete equity. Focussing on the ‘Prehistories 1’ permanent exhibition, which opened in 2005 at the National Historical Museum in Stockholm, Sweden, her detailed analysis reveals that women have been included in the exhibition narratives to a greater extent than in previous exhibitions but that male characters are still represented as older, more authoritative, and powerful, and women as closer to nature. Children and childhood are, likewise, often underrepresented in museum archaeology, despite the high proportion of children among museum visitors (Sofaer Derevenski 1999; Brookshaw 2010).

Archaeological site museums

Museums at archaeological sites and parks focus on the excavated remains and historic landscapes of particular places, but they do not exist in isolation, either museologically or socially (Mgomezulu 2004). As a consequence, they raise many questions. How should such archaeological museums be managed? How should their archaeological remains be preserved? To what extent should reconstruction be used in their public presentation? And how might they work with local urban and rural communities? Certainly archaeological site museums have multiple responsibilities: to undertake on-site preservation, documentation, research, exhibition, and interpretation, as well as to raise public awareness of the archaeological heritage and to provide a source of economic income for local people (e.g. Ertürk 1998; Hachlili 1998).

In contrast to regional and national archaeological museums with extensive collections, site museums have the significant interpretative and ethical advantage of being able to present the histories of archaeological remains in context – or at least close to their places of discovery. But they do not always capture the imagination of visitors, due to the removal of star finds to more prominent museums, or a lack of funding to revive old displays of often large archaeological collections, or because of the presence of complicated and decayed archaeological remains. A curatorial emphasis on preservation, education, and tourism (particularly at designated World Heritage Sites) can also make them feel rather heavy going (e.g. Ennabli 1998; Matos Moctezuma 1998; Sarma 1998). In some cases, full-scale and partial reconstruction can lead to new archaeological understandings and memorable visitor experiences, while archaeological tours, experiments, and workshops can prompt dialogues between visitors and experts (e.g. Edgren 1998; Paardekooper 2012). However, as with archaeological artefacts, reconstruction must be used with caution. For example, York Archaeological Trust's painstaking excavation, multi-sensory reconstruction, and prominent marketing of the exceptionally well preserved Anglo-Scandinavian alley on the Coppergate site at the Jorvik Viking Centre has proved a great commercial success, at the same time as challenging public preconceptions of the Vikings (Addyman and Gaynor 1984 – **Chapter 23**; Jones 1999). The centrepiece for visitors is a 'timecar' ride through a reconstructed street scene, complete with evocative sounds and smells (Aggleton and Waskett 1999). Yet, this project has been harshly criticised by archaeological theorists, who question the museum's emphasis on empirical accuracy and the passivity of visitor experiences (Shanks and Tilley 1992). Conceptual concerns could also be raised about the authenticity of the visitor experience at the replica of the famous Palaeolithic painted cave in the new Museum of Altamira, opened in 2001 in response to growing anxiety over the preservation of the original (Lasheras Corruçaga and Fatás Monforte 2006 – **Chapter 24**). Digital technologies now offer virtual alternatives to more permanent reconstructions (e.g. Callebaut and Sunderland 1998), but tend to provide primarily visual experiences.

The Viking Ship Museum at Roskilde in Denmark offers visitors a more active experience, whilst also operating as an economically important tourist attraction (Bärenholdt and Haldrup 2006). Until the early 1980s, the central asset of the museum was its well-researched exhibition of five well-preserved Viking wrecks

excavated from Roskilde Fjord. But since then, as the museum has gained growing media attention for its experimental work in constructing and sailing replica ships, the museum has increased activities which involve visitors more directly. In particular, it has constructed, with the financial backing of the local municipality, a ‘Museum Island’ for a variety of experiences relating to the Viking Age and its ships, ranging from painting shields and stamping coins, to dressing up as Vikings, to discussions with professional shipbuilders, to sailing trips in replica Viking boats. This, in turn, has contributed to the wider redevelopment of the harbour area in Roskilde, and has boosted local pride and identity.

Beyond Europe, managers of archaeological site museums have also sometimes tried to acknowledge local communities and cultural minorities and their socio-economic needs. For example, one of the key challenges for managers of the Luxor Museum of Ancient Egyptian Art since the mid-1970s has been to involve the local community in the programme of this site museum, which was (until recently) one of the world’s foremost international tourist destinations (El Mallah 1998). Here, the museum’s strategy has been to educate the inhabitants of modern Luxor — informing them about new archaeological discoveries and about the significance of on-going conservation work. But ‘education’ can be criticised as a one-way communication process. In Latin America, by contrast, tensions arising from growing international tourism, on the one hand, and the political articulation of the socio-economic aspirations of relatively disadvantaged local and/or descendant communities, on the other hand, have sometimes led ethically-minded site managers to develop more creative strategies. Local stewardship, consultation, public education and outreach, accessibility, and training of local people have all been tried and tested here within the context of a global economy, with mixed benefits for protecting ancient archaeological sites and for developing living local communities (Silverman 2006 – **Chapter 25**). Examples range from the troubled story of the San Lorenzo Tenochtitlán Community Museum in Mexico, centred on a contested colossal sculpted Olmec head (Cyphers and Morales-Cano 2006), to the more positive scenario of the community site museum at Agua Blanca in Ecuador, where the local community has been enabled by a long-term archaeological project to incorporate ideas about stewardship, education and archaeological heritage into their value system and economic needs (McEwan et al. 2006). Analogies can be drawn here with

ecomuseums, dedicated to encapsulating the special nature of places, building sustainable and empowered local communities, and caring for and exhibiting their tangible and intangible heritage (Davis 1999). But precisely why community museums have become part of indigenous groups' identities – given the place of archaeology and the museum in colonial and Western history – raises more questions than answers (Hastorf 2006).

New archaeology museum architecture

What kinds of modern museum architecture work best at archaeological sites and with archaeological collections?

In contrast to old-fashioned, dark, and crowded museums, some new archaeology museum buildings have used glass walls, floors, and ceilings to great effect. A pioneering example is Kevin Roche, John Dinkeloo and Associates' glass pavilion, constructed in 1976 to showcase the Egyptian Temple of Dendur in the Metropolitan Museum of Art in New York, complete with a lake representing the River Nile and a view of Central Park (Gissen 2009; Rosenblatt 2001). (However, the Roche building has now fallen out of favour with the Museum's Trustees, who in 2015 selected David Chipperfield to replace it with a new design.) Other outstanding examples include Norman Foster's Great Court in the British Museum in London (Anderson 2000), and Bernard Tschumi's new Acropolis Museum in Athens (Rask 2010 – **Chapter 26**). More local European examples are Patroklos Karantinos's Archaeological Museum of Thessaloniki (Grammenos 2011), Henri Ciriani's Arles Museum of Antiquity (Ryan 2012), Philippe Chaix and Jean-Paul Morel's archaeological museum at Saint-Romain-en-Gal, Tschumi's archaeological visitor centre at Alésia (Barreneche 1997), and Holzer Kobler Architekturen's *paläon* museum and research centre dedicated to the 300,000 year old Schöningen spears and their golden-clad Nebra Ark visitor centre at Wangen. Glass makes their galleries seem bright, spacious, clean, and cool. It illuminates objects with natural light, it enables visitors to walk over and look down on excavated remains, and it sets up visual dialogues with adjacent archaeological sites and landscapes. Such glittering architectural designs can be stunning, but we should not suspend our critical faculties regarding their underpinning Modernist aesthetics (sometimes combined with

Classical gestures), for this often comes with a museological tendency to transform ancient, broken, and decayed, objects into sterilized artworks to be appreciated visually, without the clutter of contextualization.

An alternative trend has been towards the burial of new archaeological museum buildings, to minimize their visual impact above-ground and to enhance the protection of archaeological collections housed within them. For example, the Museum of the Yang Emperor Mausoleum of the Han Dynasty at Xi'an is an entirely underground structure, designed to be quake-proof, insulated from outside temperature fluctuations, illuminated by natural light, and masked by a roof lawn (Chen et al. 2007 – **Chapter 27**). Henning Larsen Architects' new Moesgaard Museum of prehistory and ethnography near Aarhus in Denmark is also partly submerged on the side of a hill, and features a sloping roof covered in grass, moss and flowers. But the desire for iconic architecture (albeit now with eco-friendly credentials) will continue to outweigh more humble curatorial concerns, if current architectural proposals are anything to judge by. For example, Coop Himmelb(l)au's project for a new Archaeological Museum in Egypt, to be situated near the excavation site of Tell el-Daba, envisages a landmark pyramid-shaped building, accessed via a large spiral ramp and powered by the sun. And in Turkey, where a policy of museum renovation is currently underway, numerous new archaeology museums are being constructed in a variety of bold architectural styles (Republic of Turkey Ministry of Culture and Tourism 2014). Restoration of old museum buildings is less fashionable, but can be effective, particularly in the case of David Chipperfield's restoration of the Neues Museum in Berlin, which intentionally retains the spirit of the war-damaged ruin (Moore 2009).

Designing archaeology displays

What are the most effective ways to display archaeological collections in museums? What key concepts underlie the designs of museum archaeology exhibitions? How can such displays offer more enjoyable and engaging experiences for visitors?

When it actually comes to mounting archaeology exhibitions, a series of competing constraints and considerations have to be negotiated. These include: the

nature of the archaeological objects themselves; available space; proposed curatorial narratives; designers' visions; conservation, security, and safety concerns; exhibition budgets; and the attitudes of visitors. In response, it is now well-established that having an aim, a plan of action, close collaboration, compromise, clarity, knowledge of one's audience, and evaluations are all essential (Schadla-Hall and Davidson 1982). Building an archaeology exhibition around an attractive theme or story-line also helps. Traditional themes tend to be rather 'archaeological' in focus, including: typology/chronology, finds from major sites, production techniques/technology, food and cooking, imports/trade, ethnic groups, social relations (including gender and power) in the past, archaeological site formation processes, and the work of archaeologists. By contrast, more popular focal themes used by the British Museum in recent years have included: a personality (such as an emperor or a leader), beauty, beliefs (held by past people), discovery (of the past), warfare and violence, exotic journeys (that visitors can be taken on), sex, and death (B. Roberts pers. comm. 2015). But archaeology exhibitions also present some persistent challenges, not least of which is how to represent the duration and passage of time, particularly to visitors whose sense of time-depth may not extend much beyond their grandparents.

One published example of a thoughtfully designed archaeology display is the Port Royal Project, which created a combined artefact-based and interactive virtual reality exhibition about the archaeology of Port Royal in Jamaica – the major English colony in the Caribbean during the seventeenth century (Helling et al. 2011 – **Chapter 28**). Its main aim, informed by constructivist theories of learning, was to arouse the curiosity of schoolchildren and other visitors to the Ocean Institute in Dana Point, California. It involved collaboration between the UCLA Cultural Virtual Reality Laboratory, MIT's Deep Water Archaeology Laboratory, Texas A&M University's Institute of Nautical Archaeology, and the Ocean Institute. Due to time and budgetary constraints, a student in Art History at UCLA took on the key roles of chief modeller and researcher for the project, with expert information provided by a variety of sources. The resultant computer model offered public visitors the opportunity to 'walk' through and explore the town of Port Royal, and middle school children the opportunity to 'swim' within the underwater archaeological site in search of the real artefacts exhibited alongside the computer equipment, together with text panels – all housed in a replica shipping crate. Evaluations showed that the

interactivity of the computer model helped make the Port Royal story relevant to visitors, and helped them understand how archaeologists employ technology to record sites. It was especially appealing to teenage students. However, it is hoped that a new, user-friendly, public interface will be added to the exhibit, because visitors can only navigate the model with the assistance of the Institute's staff or volunteers.

There is always room for improvement, and recent research is offering new insights into what makes effective object-based displays in museums. Conspicuous objects tend to be attractive to visitors. Egyptian mummies, for example, whose material qualities (such as size, colour, shape, symmetry, and texture) and non-material attributes (age, iconicity, and familiarity), easily attract and hold the visitor's attention. However, research by Francesca Monti suggests that inconspicuous 'silent' objects, such as Egyptian figurines (or 'shabtis'), can also be displayed effectively, particularly when exhibition designers take account of the key factors that encourage visitor interaction with the displays (Monti and Keene 2013: 221-40). These include: uninterrupted sight lines, strategic positioning of objects, moving images, striking colours, sound, graphic (as opposed to text-based) display of information, moving images, opportunities for personal discovery, selection of communicative objects, and the use of varied, multi-sensory media.

Visitor-focussed factors have informed, for example, the recent re-display of the Tomb-chapel of Nebamun gallery in the British Museum (Monti and Keene 2013). The design of this room generates a fresh and relaxed atmosphere, being relatively light and spacious, with sky-blue walls and case interiors and a limestone-coloured floor and ceiling. Its careful layout echoes that of an ancient tomb-chapel. Large fragments of eleven beautiful paintings from the ancient structure are displayed, with graphic panels below drawing attention to and explaining details. The scenes in these paintings (which represent the lives of elite and 'ordinary' Egyptians) are complemented by an even distribution of spectacular and inconspicuous contemporary objects. Eye-catching large photographs of Egypt, drawings, and a 3D video (without an intrusive soundtrack) also help to contextualise and reconstruct the tomb-chapel. Evaluations have confirmed that this gallery has a relatively high 'holding power', with many visitors slowing down to concentrate on the exhibition, and consequently learn from its messages about ancient Egyptian life and death.

Teaching and learning through museum archaeology

What and how should museum visitors learn through archaeology?

Although the public can encounter archaeology across a wide variety of contexts and media, museums with archaeological collections remain an important place for teaching and learning about archaeology. Here, museum education programmes seek to cater for a variety of audiences, although young visitors – and school groups in particular – are a key target. The museum educators' aim has become not simply to teach people about the importance, techniques, and ideas of archaeology, but (in line with constructivist theory) to empower them to develop to their own experience and knowledge of the past through engaging with its objects – both 'real' and replica.

In practice, a wide variety of formats are used to deliver such educational programmes (Lea 2000 – **Chapter 29**). The standard approach of museums, and the least-costly in terms of staff time, is to invite the public to access their collections through self-guided tours of permanent or temporary exhibitions, which inevitably contain explanatory text panels and labels, sometimes supplemented by traditional worksheets for children. But deeper engagement is usually achieved in less restricted situations involving more direct interaction with museum collections and staff. Guided tours or lectures can be interesting and informative, particularly for adults. But children learn best by doing rather than looking and listening, and for museum educators this usually means 'hands-on', demanding as it is in terms of staffing. The scope of 'hands-on' possibilities is broad, ranging from handling and recording ancient artefacts to making and trying out replicas and models, and having the potential to stimulate not only touch but all the senses for the benefit of visitors with differing degrees of sensory and learning ability (Coles 1984).

Museum archaeologists have been particularly successful in using hands-on experiences to capture the attention and imagination of younger visitors, especially by involving them in active and enjoyable problem-solving. Tasks can include sorting mixed assemblages by material and reconstructing complete objects from fragments.

A classic example is provided by the award-winning Archaeological Resource Centre (ARC) in York (today rebranded as ‘Jorvik DIG’) (e.g. Jones 1995, 1999; Moussouri 1998). The prime objective of the archaeological activity area and its friendly staff is to allow visitors of all ages and abilities to learn more about how people lived in the past through handling and sorting archaeological finds and experimenting with different crafts and technologies, such as stitching together copies of one-piece Roman leather shoes. Active visitor participation is the key concept here. However, Janet Owen (1999 – **Chapter 30**), commenting on hands-on activities connected to museum archaeology displays in the UK in the 1990s, has argued that such learning experiences can actually remain passive and intellectually closed: their outcomes being pre-determined and stage-managed, with little encouragement to think further (and critically) about the archaeological objects and alternative interpretations of them.

Constraints and opportunities to exploring the past in new ways are presented by the necessity to make museum education programmes relevant to school curriculums (ultimately, to ensure their attractiveness to visiting school groups) (e.g. Henson 2002). A good example is provided by the re-display of the Alexander Keiller Museum in Avebury, UK in the 1990s (Stone 2004 – **Chapter 31**). The World Heritage Site of Avebury, with its cluster of important prehistoric monuments, is a popular venue for school visits, especially those with children in the 7 to 11 age range. When the time came to re-display its archaeology collection, the English Heritage team recognised the importance of connecting the new exhibition to the National Curriculum. This was not easy, since none of the core units of the history curriculum (then) covered any prehistoric period. Nevertheless, connections were made to the curriculum’s target to introduce students to the use of historical sources, including the fragmentary nature of historical (archaeological) evidence and the subjectivity of interpretation based on such evidence. At the same time, the team tried to respond to the results of a survey of the interests of local school children regarding the monuments’ builders. They wanted to know about things central to their own world, such as: where did they go to the toilet and what did they wash with, what clothes did they wear, what were their houses and weapons like, what animals did they have, how did they die, did children go to school, and what games did they have? Despite the difficulty of answering many of these questions, the team came up with

some innovative solutions, which sought to be interesting, educational, and fun. For example, they included a life-size Neolithic human figure in the display, but one that was presented in two ‘schizophrenic’ halves – one side showing a ragged person, the other side showing a more sophisticated individual (painted, tattooed, with well-made clothes and jewellery) – and with a caption below acknowledging that archaeologists are unsure about what people really looked like in the Neolithic, although they are sure that they did not look like stereotypical cartoon cave-men.

Museum educators’ determination to demonstrate the relevance of their collections to schools can also be seen in the development of outreach activities, aimed both at enhancing access to museum collections and at extending the reach of the museum into the classroom. The Museum of London, for example, developed a series of 200 ‘mini-museum’ boxes of Roman archaeological material, suitably packed and presented, to be lent to a large number of schools in the Greater London area (Hall and Swain 2000 – **Chapter 32**). They used modified metal tool boxes with drawers, which combined durability with display potential. Real objects (including fragments of pottery and building tile), from old collections of limited archaeological value, were packed in polystyrene boxes. Replica objects (including a samian cup, a clay lamp, a bronze manicure set, a glass perfume bottle, a writing tablet and stylus, coins, and a figurine head) were set into foam recesses. Each box also contained a graphic panel about the Romans, the Museum of London, and archaeology, and teachers’ resource packs. But museum outreach does not need to end in the classroom. Penrith Museum in North West England, for example, successfully established a two-way process connecting the museum to local schools through outreach projects designed to complement their special exhibitions in 2002 and 2006 on prehistoric rock art in Cumbria (Clarke and MacDougall 2010; c.f. Owen 2003). Importantly, a museum visit by each school was a condition of participation in the project, which then involved one-day school-based workshops led by a professional artist to create new artworks inspired by the rock art, and culminated in the incorporation of the new works in the museum exhibitions, which proved to be two of the most popular ever held there.

Another recent example, which builds upon many of the principles and practices outlined above, is provided by the archaeology programme offered to

visitors at the Isaac Royall house museum in Massachusetts (Chan 2011 – **Chapter 33**). This was home to one of the largest slaveholders and traders in New England during the eighteenth century. The elegant mid-Georgian architecture and its period rooms were originally foregrounded in presentations to the public, together with a narrative of Isacc Royall as a ‘benevolent patriarch and self-made man’. However, archaeological excavations at this site encountered the hidden history of slavery, and consequently investigated the social relations between master and slave, the cultural process of creating distinct race and class categories, and the part played by material things in these dynamic relations and processes. Following on from this, heritage professionals now present a more critical history of the site. They also strive to empower the public to understand, appreciate, and question what archaeology has to offer, through a new archaeology exhibition, signage, interactive guided tours (oriented around the movements and responsibilities of enslaved people), workshops, teacher seminars, after-school programmes, and family events. And this formula has evidently been successful, since school groups from all over Massachusetts now come to Royall House as a regular part of their history curriculum.

Public engagement in, and perceptions of, museum archaeology

Who is ‘the public’ that visits (or does not visit) museums with archaeology collections? What do these people want from museums with archaeological collections, what preconceptions do they bring to such museums, and what do they take away from their encounters with archaeology? How can museum archaeologists make such encounters more effective? And how might traditionally alienated groups be persuaded to contribute to the work of museum archaeology?

Archaeological curators traditionally served the needs of the archaeological community: allowing their museums to be used in particular as repositories for excavated artefacts and in general for archaeological collection, preservation, interpretation, education, and research (e.g. Peers 1999). Museum archaeologists now recognize that they should also serve the needs of a wider, culturally diverse, and (often) tax-paying public. This ‘turn towards the public’ (Merriman 2004: 88 – **Chapter 34**) has taken many forms in the work of museum archaeologists, some of which have been discussed above, including hands-on exhibits, more culturally

inclusive exhibitions, behind the scenes tours, and loan boxes. Another example is that of digital access to museum archaeology, including the digitization of museum collections and related information and the creation of new opportunities to explore and interact with them both within museums and via the Internet. Despite an initial reluctance by some museums, particularly towards virtual reality technologies, this field has expanded enormously during the early years of the twenty-first century and will continue to do so in ever more creative ways (e.g. Hall et al. 2002; Sanders 2002; Bruno et al. 2010). The British Museum's extensive website (<https://www.britishmuseum.org/>), for example, provides information on visiting, the work of the museum and how to support it, the museum's research projects and exhibitions, access to the museum's collections online, educational resources for different kinds of learners, curatorial blogs with space to post comments, and a shop. It also offers short videos of curators introducing potential visitors to the objects, thinking, and work underpinning current exhibitions. Another example is the Burke Museum's 'The Archaeology of Seattle's West Point' interactive online exhibition, which won a *Communication Arts* Interactive Design Award in 2006 (<http://www.burkemuseum.org/westpoint/>). This exhibit tells the story of the archaeological investigation of a prehistoric site in Seattle's Discovery Park and of the people who lived there 4000 years ago, using text, images, and audio-visual videos. A third example is the website of the Shandong University Museum in China (Xiang et al. 2003). This makes use of several multimedia technologies to present its archaeological collections, including a searchable database, interactive texts, audio commentaries, photographs, video, virtual reconstructions of artefacts, animations, and a virtual tour of the museum. But we still need to understand more about the people who (physically and virtually) visit museums with archaeological collections.

We have some idea of what works best for visitors. According to a survey of visitors to museums in Japan with archaeological collections (Haggis 2008 – **Chapter 35**), intended to ascertain which museum activities people find interesting or most useful in learning about archaeology and the past, members of the public prefer a more participatory, practical, and 'hands on' experience at a museum. Examples include working together with archaeologists on excavations, and joining in with experimental activities, such as pottery making, fire starting, and making stone tools.

We also know that visitors bring not only prior knowledge to archaeological exhibitions, but sometimes also misconceptions and prejudices. Research undertaken for the Petrie Museum of Egyptian Archaeology in London, designed to explore the nature and limits of the public's fascination with Ancient Egypt, found that focus groups (of varying ages and knowledge of Egypt) generally understood Ancient Egypt through a self-contained and self-satisfying set of popular myths and stereotypes, which included pharaohs, slaves, pyramids, tombs, buried treasure, and the mummy's curse (MacDonald 2003; MacDonald and Shaw 2004 – **Chapter 36**). They were positive in their view of archaeology, seeing it as a virtuous search for artefacts. By contrast, they had very limited understanding of, or interest in, how ordinary people lived in Ancient Egypt, or in its African context, its chronology and transformation over time, and its relation to modern Egypt. Black participants, however, were more critical, feeling, for instance, that Ancient Egypt had been appropriated as part of white history. Similar findings emerged from a more recent study undertaken by Gemma Tully (2011), who asked members of an Egyptian community about their opinions on the British Museum's plans to re-display the tomb-chapel paintings of Nebamun (discussed above). They wished to see new, peopled, daily life narratives that would challenge stereotypes and enable audiences to make connections with their own lives. As Sally MacDonald (2003: 99) points out to the curators of Western museums with collections of Ancient Egypt, 'The challenge is to exploit the subject's popularity while questioning some of the assumptions on which that popularity is based.' In Egypt itself, the appropriation of Ancient Egypt by foreign archaeologists and tourists has also led to the alienation of local communities. For example, Madline El Mallah, Director of the Luxor Museum of Ancient Egyptian Art, acknowledged some years ago: 'the museum constitutes nothing of value to the townspeople' (El Mallah 1998: 18). However, a recent study suggests that a postcolonial museum tradition has now been established in Egypt, which has redefined and reclaimed Egypt's indigenous heritage for an increasingly local audience (Doyon 2008). This perspective has also informed a recent museum exhibition in the UK dedicated to 'Re-imagining Egypt', which involved close collaboration with an Egyptian contemporary artist whose work actively commented on the archaeological collections and on past and present-day societies (Tully, this volume – **Chapter 37**).

If museum archaeology is to challenge its own colonialist and racist history, it must, then, collaborate with members of those communities whose own cultural histories are entangled in archaeological collections. In North America in particular, following the watershed moment of the 1990 enactment of NAGPRA (discussed above) — which describes the rights of Native American and Native Hawaiian groups with respect to cultural items held in museums and calls for field archaeologists to consult with those groups — new forms of good practice are beginning to be established (Carr-Locke and Nicholas 2011 – **Chapter 38**). These characteristically viewing heritage as living and dynamic rather than static and artefact-based, acknowledge different ways of interpreting the past, respect Indigenous cultural values, encourage collaboration, and disrupt the academic boundaries separating archaeology from anthropology, history, ethnology, and museum studies. In Canada, for example, constructive collaboration between the Assembly of First Nations, the Canadian Museums Association Task Force on Museums and First Nations, and the Canadian Archaeological Association Aboriginal Heritage Committee led to the development of new collections policies and exhibitions (Holm and Pokotylo 1997). And in Mexico members of local descendant communities and archaeologists have co-developed a ‘living museum’ around the ancient Maya archaeological site of Chunchucmil (Ardren 2002 – **Chapter 39**). Going one step further, at the Makah Cultural and Research Center in Washington State, which was established as a museum by the Makah Indian Nation following a collaborative archaeological excavation by Washington State University of the pre-contact village of Ozette, the collections are not sorted, stored, and labelled according to established archaeological or museological categories, but by ownership according to household. Similarly, a collaborative project between the A:shiwi A:wan Museum and Heritage Center of Zuni, the University of California Los Angeles (UCLA) and the Museum of Anthropology and Archaeology at Cambridge University in the UK has sought to re-document knowledge about the Cambridge museum collections of Zuni objects, incorporating descriptions of digitized collections by Indigenous source communities (Srinivasan et al. 2010). As a consequence, the Cambridge catalogue has been enhanced, with meaningful stories and narratives about the objects, as well as information about their historical and modern uses in the context of rituals, activities and lived experiences.

A more controversial example is provided by Manchester Museum's 2008 temporary exhibition of the 2000-year-old 'bog body' of Lindow Man, found not far from Manchester in the UK (James 2008; Sitch 2009; Brown 2011 – **Chapter 40**; Hutton 2011). In order to increase the relevance of the display to contemporary society and to attract new audiences, this exhibition questioned traditional museum expertise, shared authority through a public consultation exercise, and experimented with exhibition making conventions (using rough, everyday materials and finishes). In so doing, it encouraged debate about the appropriateness of the museum display and interpretation of human remains (as discussed above). It used as its core structure interviews of seven people with personal experience of Lindow Man: one of the peat diggers who discovered the body, a local woman who campaigned for the 'repatriation' of the body from the British Museum to Manchester, a forensic scientist who examined the body, a neo-Druid priest, a landscape archaeologist, a curator from the Manchester Museum, and a curator from the British Museum. Despite some commentators criticising this approach as post-modern self-indulgence, and the exhibition as bewildering and alienating, wider audience evaluation indicated that the majority of visitors did learn something from the exhibition, were moved by the experience, and felt able to contribute to debate about the bog body.

Final questions

Given the questioning approached advocated here, it seems appropriate to end with yet more questions. Is the future of museum archaeology safe? Will museum archaeology retain its distinct professional identity? Will professional standards in museum archaeology become more universal? Who will pay for museum archaeology and conservation? How much political and popular support can museum archaeology count on? How successfully will archaeological site museums compete with other tourist attractions? Will traditionally disenfranchised groups be persuaded that museum archaeology matters? Will the illicit trade in antiquities ever be defeated? Will repatriation requests decline? Will museums cease to collect and display human remains? Will archaeological collections continue to inform and inspire future generations? What new stories about past people will result from collections research? Will museum designers create more effective, engaging, and enjoyable archaeological exhibitions? What new messages will museum displays present and visitors learn

about the past and its relation to the present? What will publics around the world expect of museum archaeology?

References

- Addyman, P and Gaynor, A. (1984) The Jorvik Viking Centre: an experiment in archaeological site interpretation. *The International Journal of Museum Management and Curatorship*, 3: 7–18.
- Aggleton, J.P. and Waskett, L. (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: 1–7.
- Alberti, S.J.M.M., Bienkowski, P., Chapman, M.J. and Drew, R. (2009). Should we display the dead? *Museum and Society*, 7(3): 133–49.
- Anderson, R. (2000) *The Great Court and the British Museum*. London: The British Museum Press.
- Ardren, T. (2002) Conversations about the production of archaeological knowledge and community museums at Chunchucmil and Kochol, Yucatán, México. *World Archaeology*, 34(2): 379–400.
- Argyropoulos, V., Aloupi-Siotis, E., Polikreti, K., Apostolides, R., El Saddik, W., Gottschalk, R., Abd el Nazeer, M., Vryonidou-Yiangou, M., Ashdjian, P., Yannoulatou, M.-C., Simon, S., Davis, W. and Kassianidou, V. (2014) Museum education and archaeological ethics: an approach to the illicit trade of antiquities. *Journal of Conservation and Museum Studies*, 12(1). Available at: <http://www.jcms-journal.com/articles/10.5334/jcms.1021210/>. Accessed 10/07/2015.
- Ascherson, N. (2000) The Museum of Scotland: review. *Public Archaeology*, 1: 82–84.
- Bærenholdt, J.O. and Haldrup, M. (2006) Mobile networks and place making in cultural tourism: staging Viking ships and rock music in Roskilde. *European Urban and Regional Studies*, 13(3): 209–24.
- Barker, A. (2010) Exhibiting archaeology: archaeology and museums. *Annual Review of Anthropology*, 39: 293–308.

- Barreneche, R.A. (1997) Digging history: a streamlined antiquities museum in southern France by Parisian architects Chaix Morel and Associates reveals the scientific process of archaeology. *Architecture: The AIA Journal*, 86(10): 102–05.
- BBC (2015) Egypt inquiry after Tutankhamun's beard glued back on. BBC News, 22 January 2015. Available at: <http://www.bbc.co.uk/news/world-middle-east-30931369>. Accessed 16/10/2015.
- Beard, M. (1993) Casts and cast-offs: the origins of the museum of classical archaeology. *Proceedings of the Cambridge Philological Society*, 39: 1–29.
- Boardman, J. (2006) Archaeologists, collectors, and museums. In: E. Robson, L. Treadwell and C. Gosden (eds.), *Who Owns Objects? The Ethics and Politics of Collecting Cultural Artefacts*. Oxford: Oxbow Books, pp. 33–46.
- Brodie, N., Doole, J. and Watson, P. (2000) *Stealing History: The Illicit Trade in Cultural Material*. Cambridge: The McDonald Institute for Archaeological Research.
- Broodbank, C. (1992) The spirit is willing. *Antiquity*, 66: 542–46.
- Brookshaw, S. (2010) The archaeology of childhood: a museum perspective. *Complutum*, 21(2): 215–32.
- Broschi, M. 1994. Archaeological museums in Israel: reflecting on problems of national identity. In: F.S. Kaplan (ed.), *Museums and the Making of 'Ourselves': The Role of Objects in National Identity*. London and New York: Leicester University Press, pp. 314–29.
- Browman, D.L. (2002) The Peabody Museum, Frederic W. Putnam, and the rise of U.S. anthropology, 1866–1903. *American Anthropologist*, 104(2): 508–19.
- Brown, P. (2011) Us and them: who benefits from experimental exhibition making? *Museum Management and Curation*, 26(2): 129–48.
- Bruno, F., Bruno, S., De Sensi, G., Luchi, M.-L., Mancuso, S. and Muzzupappa, M. (2010) From 3D reconstruction to virtual reality: a complete methodology for digital archaeological exhibition. *Journal of Cultural Heritage*, 11: 42–49.
- Bünz, A. (2012) Is it enough to make the main characters female? An intersectional and social semiotic reading of the exhibition *Prehistories I* at the National Historical Museum in Stockholm, Sweden. In: I.-M. Back Danielsson and S. Thedéen (eds.), *To Tender Gender: The Pasts and Futures of Gender*

- Research in Archaeology*. Stockholm Studies in Archaeology 58. Stockholm: Department of Archaeology and Classical Studies, Stockholm University, pp. 97–115.
- Bustard, W. (2000) Archaeological curation in the 21st century. Or, making sure the roof doesn't blow off. *CRM Online*, 23(5): 10–15.
- Callebaut, D. and Sunderland, J. (1998) Ename: new technologies perpetuate the past. *Museum International*, 50(2): 50–54.
- Cao, J., Rong, B., Lee, S., Chow, J.C., Jo, K., Liu, S. and Zhu, C. (2005) Composition of indoor aerosols at Emperor Qin's Terra-cotta Museum, Xi'an, China, during summer, 2004. *China Particuology*, 3(3): 170–75.
- Carr-Locke, S. and Nicholas, G. (2011) Working towards greater equity and understanding: examples of collaborative archaeology and museum initiatives with indigenous peoples in North America. *Society for Applied Anthropology Newsletter*, 22(1): 4–9.
- Chan, A.A. (2011) Translating archaeology for the public: empowering and engaging museum goes with the past. *International Journal of Heritage Studies*, 17(2): 169–89.
- Chapman, J.C. (1981) The value of Dalmatian museum collections to settlement patterns. In: A.-M.E. Cantwell, J.B. Griffin and N.A. Rothschild (eds.), *The Research Potential of Anthropological Museum Collections*. New York: The New York Academy of Sciences, pp. 529–55.
- Cheape, H. (2010) The Society of Antiquaries of Scotland and their museum: Scotland's national collection and a national discourse. *International Journal of Historical Archaeology*, 14: 357–73.
- Chen, Z., Zhang, P. and Li, J. (2007) Development and utilization of underground space for the protection of relics in the Yang Emperor Mausoleum of the Han Dynasty. *Frontiers of Architecture and Civil Engineering in China*, 1(2): 229–33.
- Childs, S.T. (1995) The curation crisis. What's being done? *Federal Archaeology*, 7(4): 11–15.
- (2006) Archaeological collections: valuing and managing an emerging frontier. In: N. Agnew and J. Bridgland (eds.), *Of the Past, for the Future: Integrating Archaeology and Conservation. Proceedings of the Conservation Theme at the*

- 5th World Archaeological Congress, Washington, D.C., 22–26 June 2003. Los Angeles: The Getty Conservation Institute, pp. 204–08.
- Chippindale, C. and Gill, D. (2000) Material consequences of contemporary classical collecting. *American Journal of Archaeology*, 104(3): 463–511.
- Christenson, A.L. (1979) The role of museums in cultural resource management. *American Antiquity*, 44: 161–63.
- Clarke, D.V. (1996) Presenting a national perspective of prehistory and early history in the Museum of Scotland. In: J.A. Atkinson, I. Banks and J. O’Sullivan (eds.), *Nationalism and Archaeology. Scottish Archaeological Forum*. Glasgow: Cruithne Press, pp. 67–76.
- (1998) New things set in many landscapes: aspects of the Museum of Scotland. *Proceedings of the Society of Antiquaries of Scotland*, 128: 1–12.
- (2000) Creating the Museum of Scotland: a reply to Neal Ascherson. *Public Archaeology*, 1: 220–21.
- Clarke, J. and MacDougall, K. (2010) Rock art in Cumbria: inspiring future generations. Education projects at Penrith Museum. In: T. Barnett and K. Sharpe (eds.), *Carving a Future for British Rock Art. New Directions for Research, Management and Presentation*. Oxford: Oxbow Books, pp. 151–58.
- Coles, P. (1984) *Please Touch. An Evaluation of the ‘Please Touch’ Exhibition at the British Museum, 31st March to 8th May 1983*. Committee of Inquiry into the Arts and Disabled People.
- Cook, B.F. (1991) The archaeologist and the art market: policies and practice. *Antiquity*, 65: 533–37.
- Copley, M.S. (2010) Towards presenting scientific research in archaeology museums. *Museum Management and Curatorship*, 25(4): 383–98.
- Corfield, M. (1988) The reshaping of archaeological objects: some ethical considerations. *Antiquity*, 62: 261–65.
- Cotton, J. (1997) Illuminating the twilight zone? The new prehistoric gallery at the Museum of London. In: G.T. Denford (ed.), *Representing Archaeology in Museums*. The Museum Archaeologist Volume 22. Winchester: Society of Museum Archaeologists, pp. 6–12.
- Cotton, J. and Wood, B. (1996) Retrieving prehistories at the Museum of London: a gallery case-study. In: P.M. McManus (ed.), *Archaeological Displays and the*

- Public: Museology and Interpretation*. London: Institute of Archaeology, University College London, pp. 53–71.
- Crawley, P. (1998) Making use of prehistory: narratives of human evolution and the Natural History Museum. In: J. Arnold, K. Davies and S. Ditchfield (eds.), *History and Heritage: Consuming the Past in Contemporary Culture*. Shaftesbury: Donhead, pp. 3–15.
- Crooke, E. (2001) *Politics, Archaeology and the Creation of a National Museum of Ireland: An Expression of National Life*. Dublin and Portland, OR: Irish Academic Press.
- Curtis, N.G.W. (2003) Human remains: the sacred, museums and archaeology. *Public Archaeology*, 3: 21–32.
- Cyphers, A. and Morales-Cano, L. (2006) Community museums in the San Lorenzo Tenochtitlán region, Mexico. In: H. Silverman (ed.), *Archaeological Site Museums in Latin America*. Gainesville, FL: University Press of Florida, pp. 30–46.
- Daehnke, J. and Lonetree, A. (2010) Repatriation in the United States: the current state of NAGPRA. In: J. Lydon and U.Z. Rizvi (eds.), *Handbook of Postcolonial Archaeology*. Walnut Creek, CA: Left Coast Press, pp. 245–55.
- Davis, P. (1999) *Ecomuseums: A Sense of Place*. London and New York: Leicester University Press.
- Department for Culture, Media and Sport (DCMS) (2005a) *Combating Illicit Trade: Due Diligence Guidelines for Museums, Libraries and Archives on Collecting and Borrowing Cultural Material*. London: Department for Culture, Media and Sport.
- (2005b) *Guidance for the Care of Human Remains in Museums*. London: Department for Culture, Media and Sport.
- Doyon, W. (2008) The poetics of Egyptian museum practice. *British Museum Studies in Ancient Egypt and Sudan*, 10: 1–37.
- Edgren, B. (1998) Eketorp Rediviva: ‘an ongoing scientific discussion’. *Museum International*, 50(2): 10–15.
- Edwards, R. (2012) *Archaeological Archives and Museums 2012*. Society of Museum Archaeologists.
- El Mallah, M.Y. (1998) The Luxor Museum of Ancient Egyptian Art: the challenge of

- abundance. *Museum International*, 50(2): 16–22.
- Ennabli, A. (1998) The Museum of Carthage: a living history lesson. *Museum International*, 50(2): 23–32.
- Errington, S. (1998) *The Death of Authentic Primitive Art and Other Tales of Progress*. Berkley, Los Angeles, London: University of California Press.
- Ertürk, N. (2006) A management model for archaeological site museums in Turkey. *Museum Management and Curatorship*, 21(4): 336–48.
- Feuchtwang, S. (2011) Exhibition and awe: regimes of visibility in the presentation of an emperor. *Journal of Material Culture*, 16: 64–79.
- Gaimster, D. (1993) Sitting comfortably? Museums and the antiquities market. In: E. Southworth (ed.), *'Picking up the Pieces' – Adapting to Change in Museums and Archaeology*. The Museum Archaeologist Volume 18. Liverpool: Society of Museum Archaeologists, pp. 30–32.
- (2001) Archaeological curatorship in the national sector: reviewing the British Museum's research function. In: P.J. Wise (ed.), *Indulgence or Necessity? Research in Museum Archaeology*. The Museum Archaeologist Volume 26. Colchester: Society of Museum Archaeologists, pp. 3–9.
- Garrigan, S.E. (2012) *Collecting Mexico. Museums, Monuments, and the Creation of National Identity*. Minneapolis and London: University of Minnesota Press.
- Giesen, M. ed. (2013) *Curating Human Remains: Caring for the Dead in the United Kingdom*. Woodbridge: The Boydell Press.
- Gilberg, M. (1987) Friedrich Rathgen: the father of modern archaeological conservation. *Journal of the American Institute for Conservation*, 26(2): 105–20.
- Gill, D.W.J. and Chippindale, C. (1993) Material and intellectual consequences of esteem for Cycladic figures. *American Journal of Archaeology*, 97(4): 601–59.
- Gissen, D. (2009) The architectural production of nature, Dendur/New York. *Grey Room*, 34: 58–79.
- Grammenos, D.V. (2011) The reconstruction and redisplay of the Archaeological Museum of Thessaloniki. *Museology*, 6: 21–29.
- Green, M. and Gordon, P. (2010) Repatriation: Australian perspectives. In: J. Lydon and U.Z. Rizvi (eds.), *Handbook of Postcolonial Archaeology*. Walnut Creek, CA: Left Coast Press, pp. 257–66.

- Greenfield, J. (2007) *The Return of Cultural Treasures*. Third edition. Cambridge and New York: Cambridge University Press.
- Guha-Thakurta, T. (1997) The museumised relic: archaeology and the first museum of colonial India. *The Indian Economic and Social History Review*, 34(1): 21–51.
- Hachlili, R. (1998) A question of interpretation. *Museum International*, 50(2): 4–5.
- Haggis, D. (2008) Public archaeology and museums in Japan. *The International Journal of the Inclusive Museum*, 1(4): 95–102.
- Hall, J. and Swain, H. (2000) Roman boxes for London's schools: an outreach service by the Museum of London. In: P. McManus, P.M. (ed.), *Archaeological Displays and the Public: Museology and Interpretation*. 2nd edition. London: Archetype Publications, pp. 87–95.
- Hall, T., Ciolfi, L., Bannon, L., Fraser, M., Benford, S., Bowers, J., Greenhalgh, C., Hellström, S.-O., Izadi, S., Schnädelbach, H. and Flintham, M. (2002) The visitor as virtual archaeologist: explorations in mixed reality technology to enhance educational and social interaction in the museum. In: *VAST'01. Virtual Reality, Archaeology and Cultural Heritage. Athens, Greece – November 28 – 30, 2001*. New York: Association for Computing Machinery, pp. 91–96, 365.
- Hastorf, C.A. (2006) Building the community museum at Chiripa, Bolivia. In: H. Silverman (ed.), *Archaeological Site Museums in Latin America*. Gainesville, FL: University Press of Florida, pp. 85–98.
- Hebditch, M. (1996) The display of Roman London. In: J. Bird, M. Hassall and H. Sheldon (eds.), *Interpreting Roman London: Papers in Memory of Hugh Chapman*. Oxford: Oxbow Books, pp. 253–61.
- Helling, H., Steinmetz, C., Solomon, E. and Frischer, B. (2011) The Port Royal Project: a case study in the use of VR technology for the recontextualization of archaeological artifacts and building remains in a museum setting. In: E. Jerem, R. Ferenc and V. Szeverényi (eds.), *On the Road to Reconstructing the Past. Computer Applications and Quantitative Methods in Archaeology (CAA). Proceedings of the 36th International Conference. Budapest, April 2-6, 2008*. Budapest: Archaeolingua, pp. 229–35.

- Henson, D. (2002) Opportunities for museums in archaeological education. In: P.J. Wise (ed.), *Public Archaeology: Remains to be Seen*. The Museum Archaeologist Volume 27. Colchester: Society of Museum Archaeologists, pp. 46–51.
- Heywood, F. (2000) Against the grain. *Museums Journal*, 100(10): 18–19.
- Holgate, V. (1996) Portraying working women: the approach taken at Verulamium Museum. In: A. Devonshire and B. Wood (eds.), *Women in Industry and Technology from Prehistory to the Present Day. Current Research and the Museum Experience. Proceedings from the 1994 WHAM Conference*. London: Museum of London, pp. 85–91.
- Holm, M. and Pokotylo, D. (1997) From policy to practice: a case study in collaborative exhibits with First Nations. *Journal Canadien d'Archéologie*, 21: 33–43.
- Hu, T., Lee, S., Cao, J., Chow, J.C., Watson, J.G., Ho, K., Ho, W., Rong, B. and An, Z. 2009. Characterization of winter airborne particles at Emperor Qin's Terra-cotta Museum, China. *Science of the Total Environment*, 407: 5319–27.
- Hutton, R. (2011) Why does Lindow Man matter? *Time and Mind*, 4(2): 135–48.
- Isaac, B. (2002) Implementation of NAGPRA: the Peabody Museum of Archaeology and Ethnology, Harvard. In: C. Fforde, J. Hubert and P. Turnbull (eds.), *The Dead and their Possessions: Repatriation in Principle, Policy, and Practice*. London and New York: Routledge, pp. 160–70.
- James, S. (2008) Repatriation, display and interpretation. *Antiquity*, 82: 770–77.
- Jenkins, I. (1992) *Archaeologists and Aesthetes in the Sculpture Galleries of the British Museum, 1800-1939*. London: British Museum Press.
- (2001) *Cleaning and Controversy: The Parthenon Sculptures, 1811-1939*. London: British Museum.
- Jenkins, T. (2011) *Contesting Human Remains in Museum Collections: The Crisis of Cultural Authority*. New York and Abingdon: Routledge.
- Jones, A. (1995) Integrating school visits, tourists and the community at the Archaeological Resource Centre, York, UK. In: E. Hooper-Greenhill (ed.), *Museum, Media, Message*. London and New York: Routledge, pp. 159–67.
- (1999) Archaeological reconstruction and education at the Jorvik Viking Centre, York, UK. In: P.G. Stone and P.G. Planel (eds.), *The Constructed Past:*

- Experimental Archaeology, Education and the Public*. London and New York: Routledge, pp. 258–68.
- Kaerer, M.-A. (2009) Manifeste architectural d'une archéologie intégrée : le Laténium (Neuchâtel, Suisse). *Les nouvelles de l'archéologie*, 117: 27–34.
- Kennedy, M. (2014) Volunteers help British Museum in crowdsourcing archaeology project. *The Guardian*, 18 August 2014.
- Killion, T.W. (2008) A view from the trenches. Memories of repatriation at the National Museum of Natural History, Smithsonian Institution. In: T.W. Killion (ed.), *Opening Archaeology: Repatriation's Impact of Contemporary Research and Practice*. Santa Fe: School for Advanced Research Press, pp. 133–50.
- Kilmister, H. (2003) Visitor perceptions of ancient Egyptian human remains in three United Kingdom museums. *Papers from the Institute of Archaeology*, 14: 57–69.
- Kinnes, I.A., Longworth, I.H., McIntyre, I.M., Needham, S.P. and Oddy, W.A. (1988) Bush Barrow gold. *Antiquity*, 62: 24–39.
- Kokkinidou, D. and Nikolaidou, M. (2000) A sexist present, a human-less past: museum archaeology in Greece. In: M. Donald and L. Hurcombe (eds.), *Gender and Material Culture in Archaeological Perspective*. St. Martin's, New York: Palgrave Macmillan, pp. 33–55.
- Kurtz, D.C. (2000) *The Reception of Classical Art in Britain: An Oxford Story of Plaster Casts from the Antique*. British Archaeological Reports 308. Oxford: Archaeopress.
- Kusimba, C.M. (1996) Archaeology in African museums. *African Archaeological Review*, 13(3): 165–70.
- Kreder, J.A. (2010) The revolution in U.S. museums concerning the ethics of acquiring antiquities. *University of Miami Law Review*, 64(3): 997–1030.
- Kristiansen, K. (1996) Destruction of the archaeological heritage and the formation of museum collections: the case of Denmark. In: W.D. Kingery (ed.), *Learning from Things: Method and Theory of Material Culture Studies*. Washington, D.C.: Smithsonian Institution Press, pp. 89–101.
- Lasheras Corruçaga, J.A. and Fatás Monforte, P. (2006) The new Museum of Altamira: finding solutions to tourism pressure. In: N. Agnew and J. Bridgland (eds.), *On the Past, for the Future: Integrating Archaeology and*

- Conservation. Proceedings of the Conservation Theme at the 5th World Archaeological Congress, Washington, D.C., 22-26 June 2003*. Los Angeles: The Getty Conservation Institute, pp. 177–83.
- Lawrence, D.H. (1932) *Etruscan Places*. New York: The Viking Press.
- Lea, J. (2000) Teaching the past in museums. In: K. Smardz and S.J. Smith (eds.), *The Archaeology Education Handbook: Sharing the Past with Kids*. Walnut Creek, CA: AltaMira Press, pp. 315–27.
- Legget, J. (2000) *Restitution and Repatriation: Guidelines for Good Practice*. London: Museums and Galleries Commission.
- Leospo, E. (1984) The archaeological discoveries in Egypt and the formation of the main collections of Egyptian antiquities. In: S. Curto and A. Roccati (eds.), *Treasures of the Pharaohs: Cairo Egyptian Museum*. Milano: Arnoldo Mondadori Editore.
- Levy, J.E. (2006) Prehistory, identity, and archaeological representation in Nordic museums. *American Anthropologist*, 108(1): 135–47.
- Lohman, J. (2012) Contested human remains. In: G. Were and J.C.H. Kings (eds.), *Extreme Collecting: Challenging Practices for 21st Century Museums*. New York and Oxford: Berghahn Books, pp. 49–57.
- Longworth, C. (1998) SPECTRUM: a ray of light for archaeologists. In: G.T. Denford (ed.), *Museums in the Landscape: Bridging the Gap*. The Museum Archaeologist 23. Winchester: Society of Museum Archaeologists, pp. 60–62.
- Longworth, C. and Wood, B. (2000) *Standards in Action. Working with Archaeology. Book 3. Guidelines for Use in the Channel Islands, England, Isle of Man, Northern Ireland, Scotland and Wales*. Cambridge: mda.
- Lyons, P.D., Adams, E.C., Altschul, J.H., Barton, C.M. and Roll, C.M. 2006. *The Archaeological Curation Crisis in Arizona: Analysis and Possible Solutions. A Report Prepared by the Governor's Archaeology Advisory Commission Curation Subcommittee*. Available at: http://azstateparks.com/committees/downloads/GAAC_Curation_Crisis_Full.pdf. Accessed 09/07/2015.
- MacDonald, S. (2003) Lost in time and space: ancient Egypt in museums. In: S. MacDonald and M. Rice (eds.), *Consuming Ancient Egypt*. London: UCL Press, pp. 87–99.

- MacDonald, S. and Shaw, C. (2004) Uncovering Ancient Egypt: the Petrie Museum and its public. In: N. Merriman (ed.), *Public Archaeology*. London and New York: Routledge, pp. 109–31.
- Masry, A.H. (1994) Archaeology and the establishment of museums in Saudia Arabia. In: F.S. Kaplan (ed.), *Museums and the Making of 'Ourselves': The Role of Objects in National Identity*. London and New York: Leicester University Press, pp. 125–68.
- Matos Moctezuma, E. (1998) Reaching beyond the site: the Great Temple Museum in Mexico City. *Museum International*, 50(2): 40–43.
- McEwan, C., Silva, M.-I. and Hudson, C. (2006) Using the past to forge the future: the genesis of the community site museum at Agua Blanca, Ecuador. In: H. Silverman (ed.), *Archaeological Site Museums in Latin America*. Gainesville, FL: University Press of Florida, pp. 187–216.
- McIntosh, S.K., Renfrew, C. and Vincent, S. (2000) 'The good collector': fabulous beast or endangered species? *Public Archaeology*, 1: 73–81.
- McManamon, F.P. (2006) Policy and practice in the treatment of archaeological human remains in North American museums and public agency collections. In: J. Lohman and K. Goodnow (eds.), *Human Remains and Museum Practice*. Paris: UNESCO, pp. 48–59.
- Melton, N., Montgomery, J., Knüsel, C.J., Batt, C., Needham, S., Parker Pearson, M., Sheridan, A., Heron, C., Horsley, T., Schmidt, A., Evans, A., Carter, E., Edwards, H., Hargreaves, M., Janaway, R., Lynnerup, N., Northover, P., O'Connor, S., Ogden, A., Taylor, T., Wastling, V. and Wilson, A. (2010) Gristhorpe Man: an Early Bronze Age log-coffin burial scientifically defined. *Antiquity*, 84: 796–815.
- Merriman, N. (1996) Displaying archaeology in the Museum of London. In: G.T. Denford (ed.), *Museum Archaeology – What's New?* Winchester: Society of Museum Archaeologists, pp. 60–65.
- (1997) The Peopling of London project. In: E. Hooper-Greenhill (ed.), *Cultural Diversity: Developing Museum Audiences in Britain*. London and Washington: Leicester University Press, pp. 119–48.
- ed. (1999) *Making Early Histories in Museums*. London and New York: Leicester University Press.

- (2000) The crisis of representation in archaeological museums. In: F.P. McManamon and A. Hatton (eds.), *Cultural Resource Management in Contemporary Society. Perspectives on Managing and Presenting the Past*. London and New York: Routledge, pp. 300–09.
- (2004) Involving the public in museum archaeology. In: N. Merriman (ed.), *Public Archaeology*. New York: Routledge, pp. 85–108.
- Merriman, N. and Swain, H. (1999) Archaeological archives: serving the public interest? *European Journal of Archaeology*, 2(2): 249–67.
- Mgomezulu, G.G.Y. (2004) Editorial. *Museum International*, 56(3): 4–6.
- Mitchell, T. (1988) *Colonising Egypt*. Cambridge: Cambridge University Press.
- Monti, F. and Keene, S. (2013) *Museums and Silent Objects: Designing Effective Exhibitions*. Farnham and Burlington (VT): Ashgate.
- Moore, R. (2009) Neues Museum by David Chipperfield Architects, Berlin, Germany. *The Architectural Review*. Available at: <<http://www.architectural-review.com/today/neues-museum-by-david-chipperfield-architects-berlin-germany/8601182.fullarticle>> Accessed 27 May 2016.
- Moser, S. (2003) Representing archaeological knowledge in museums: exhibiting human origins and strategies for change. *Public Archaeology*, 3: 3–20.
- (2006) *Wondrous Curiosities: Ancient Egypt at the British Museum*. Chicago: University of Chicago Press.
- Moussouri, T. (1998) Family agendas and the museum experience. In: G.T. Denford (ed.), *Museums for the 21st Century*. The Museum Archaeologist Volume 24. Winchester: Society of Museum Archaeologists, pp. 20–30.
- Munch Rasmussen, J. (2014) Securing cultural heritage objects and fencing stolen goods? A case study on museums and metal detecting in Norway. *Norwegian Archaeological Review*, 47(1): 83–107.
- Museums and Galleries Commission (1992) *Standards in the Museum Care of Archaeological Collections*. London: Museums and Galleries Commission.
- Museums Association (2005) *Collections for the Future. Report of a Museums Association Inquiry*. London: Museums Association.
- Nafziger, J.A.R. and Dobkins, R.J. (1999) The Native American Graves Protection and Repatriation Act in its first decade. *International Journal of Cultural Property*, 8(1): 77–107.

- Nash, S.E. and O'Malley, N. (2012) The changing mission of museums. In: M. Rockman and J. Flatman (eds.), *Archaeology in Society: Its Relevance to the Modern World*. New York: Springer, pp. 97–109.
- O'Keefe, P.J. (1997) *Trade in Antiquities. Reducing Destruction and Theft*. London and Paris: Archetype and UNESCO.
- Owen, J. ed. (1995) *Towards an Accessible Archaeological Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales*. Society of Museum Archaeologists.
- (1996) Making histories from archaeology. In: G. Kavanagh (ed.), *Making Histories from Museums*. London and New York: Leicester University Press, pp. 200–15.
- (1999) Interaction or tokenism? The role of hands-on activities in museum archaeology displays. In: N. Merriman (ed.), *Making Early Histories in Museums*. London: Leicester University Press, pp. 173–89.
- (2003) The art of archaeology initiative — a summary report. In: P.J. Wise (ed.), *The Art of Archaeology*. The Museum Archaeologist Volume 28. Colchester: Society of Museum Archaeologists, pp. 1–21.
- Paardekooper, R.P. (2012) *The Value of an Archaeological Open-Air Museum is in its Use. Understanding Archaeological Open-Air Museums and their Visitors*. Leiden: Sidestone Press.
- Paroff, S.P. (2004) Another victim of the war in Iraq: the looting of the National Museum in Baghdad and the inadequacies of international protection of cultural property. *Emory Law Journal*, 53(4): 2021–54.
- Peers, R. (1999) Museums and archaeology. In: J. Beavis and A. Hunt (eds.), *Communicating Archaeology*. Oxford: Oxbow Books, pp. 113–18.
- Perrin, K. (2002) *Archaeological Archives: Documentation, Access and Deposition. A Way Forward*. London: English Heritage.
- Phillips, L.S. and Roundhill, L. (2007) Caring for an Egyptian mummy and coffin. In: V. Cassman, N. Odegaard and J. Powell (eds.), *Human Remains: Guide for Museums and Academic Institutions*. Lanham, MD: AltaMira Press, pp. 269–73.
- Pohlman, D. (2004) Catching science in the act: *Mysteries of Çatalhöyük*. In: D. Chittenden, G. Farmelo and B.V. Lewenstein (eds.), *Creating Connections:*

- Museums and the Public Understanding of Current Research*. Walnut Creek, CA: AltaMira Press, pp. 267–75.
- Polikreti, K. (2007) Detection of ancient marble forgery: techniques and limitations. *Archaeometry*, 49(4): 603–19.
- Pye, E. (2000) *Caring for the Past: Issues in Conservation for Archaeology and Museums*. London: James & James.
- Quirke, S. (2012) Lyricism and offence in Egyptian archaeology collections. In: G. Were and J.C.H. King (eds.), *Extreme Collecting: Challenging Practices for 21st Century Museums*. New York and Oxford: Berghahn Books, pp. 37–48.
- Rask, K. (2010) The New Acropolis Museum: where the visual feast trumps education. *Near Eastern Archaeology*, 73(1): 56–59.
- Republic of Turkey Ministry of Culture and Tourism (2014) *Progressive Museums in Turkey*. Ankara: General Directorate for Cultural Heritage and Museums, Republic of Turkey Ministry of Culture and Tourism.
- Robbiola, L. and Portier, R. (2006) A global approach to the authentication of ancient bronzes based on the characterization of the alloy-patina-environment system. *Journal of Cultural Heritage*, 7: 1–12.
- Roberts, P. (2006) Barriers or bridges? Museums and acquisitions in the light of new legal and voluntary codes. In: E. Robson, L. Treadwell and C. Gosden (eds.), *Who Owns Objects? The Ethics and Politics of Collecting Cultural Artefacts*. Oxford: Oxbow Books, pp. 47–60.
- Rosenblatt, A. (2001) *Building Type Basics for Museums*. New York and Toronto: John Wiley & Sons.
- Ryan, R. (2012) Blue heaven. *The Architectural Review*, 1382: 35–40.
- Saleh, F. (1992) Documentation issues in Egyptian museums. In: *What Museums for Africa? Heritage in the Future. Proceedings of the Encounters. Benin, Ghana, Togo. November 18-23, 1991*. Paris: ICOM, pp. 205–10.
- Sanders, D.H. (2002) Virtual archaeology and museums: where are the exhibits? In: F. Niccolucci (ed.), *Virtual Archaeology: Proceedings of the VAST Euroconference, Arezzo 24-25 November 2000*. BAR International Series 1075. Oxford: Archaeopress, pp. 187–94.
- Sarma, I.K. (1998) Archaeological site museums in India: the backbone of cultural education. *Museum International*, 50(2): 44–49.

- Saville, A. (1994) Artefact research in the National Museums of Scotland. In: D. Gaimster (ed.), *Museum Archaeology in Europe*. The Museum Archaeologist 19. Oxford: Oxbow Books, pp. 155–66.
- Savino, M. (2015) Aziz Ogan and the development of archaeological museums in the Turkish Republic. *Museum History Journal*, 8: 88–101.
- Schadla-Hall, T. and Davidson, J. (1982) It's very grand but who's it for? Designing archaeology galleries. *Museums Journal*, March: 171–75.
- Scott, M.R. (2007) *Rethinking Evolution in the Museum: Envisioning African Origins*. Abingdon: Routledge.
- Shanks, M. and Tilley, C. (1987a) *Re-Constructing Archaeology: Theory and Practice*. Cambridge: Cambridge University Press.
- (1987b) *Social Theory and Archaeology*. Oxford: Polity Press.
- (1993) *Re-Constructing Archaeology: Theory and Practice*. 2nd edition. London: Routledge.
- Shaw, W.M.K. (2003) *Possessors and Possessed: Museums, Archaeology, and the Visualization of History in the Late Ottoman Empire*. Berkeley and Los Angeles, CA and London: University of California Press.
- Shell, C.A. and Robinson, P. (1988) The recent reconstruction of the Bush Barrow lozenge plate. *Antiquity*, 62: 248–60.
- Shestack, A. (1989) The museum and cultural property: the transformation of institutional ethics. In: P. Mauch Messenger (ed.), *The Ethics of Collecting Cultural Property: Whose Culture? Whose Property?* Albuquerque: University of New Mexico Press, pp. 93–101.
- Silverman, H. (2006) Archaeological site museums in Latin America. In: H. Silverman (ed.), *Archaeological Site Museums in Latin America*. Gainesville, FL: University Press of Florida, pp. 3–17.
- Sitch, B. (2009) Courting controversy: the Lindow Man exhibition at the Manchester Museum. *University Museums and Collections Journal*, 2: 51–54.
- Skeates, R. (2000) *The Collecting of Origins. Collectors and Collections of Italian Prehistory and the Cultural Transformation of Value (1550-1999)*. BAR International Series 868. Oxford: British Archaeological Reports.
- (2002) Speaking for the past in the present: text, authority and learning in archaeology museums. *Public Archaeology*, 2(4): 209–18.

- (2005) Museum archaeology and the Mediterranean cultural heritage. In: E. Blake and A.B. Knapp (eds.), *The Archaeology of Mediterranean Prehistory*. Malden, MA, Oxford and Victoria: Blackwell Publishing, pp. 303–20.
- Sofaer Derevenski, J. (1999) Children in archaeological narrative. *Museum Archaeologists News*, 28: 6–9.
- Sonderman, R.C. (1996) Primal fear: deaccessioning collections. *Common Ground: Archaeology and Ethnography in the Public Interest*, 1(2): 27–29.
- Srinivasan, R., Becvar, K.M., Boast, R. and Enote, J. (2010) Diverse knowledges and contact zones within the digital museum. *Science, Technology & Human Values*, 35(5): 735–68.
- St. Clair, W. (1998) *Lord Elgin and the Marbles. The Controversial History of the Parthenon Sculptures*. Oxford and New York: Oxford University Press.
- Stead, I.M., Bourk, J. and Brothwell, D. (1986) *Lindow Man: The Body in the Bog*. London: The British Museum Press.
- Stone, P.G. (2004) The re-display of the Alexander Keiller Museum, Avebury, and the National Curriculum in England. In: P.G. Stone and B.L. Molyneaux (eds.), *The Presented Past: Heritage, Museums and Education*. London and New York: Routledge, pp. 190–205.
- Stone, P.G. and Farchakh Bajjaly, J. (2011) *The Destruction of Cultural Heritage in Iraq*. Woodbridge: Boydell Press.
- Sullivan, L.P. (1992) *Managing Archaeological Resources from the Museum Perspective*. Technical Brief No. 13. Washington, D.C.: U.S. Department of the Interior, National Park Service.
- Sullivan, L.P. and Childs, S.T. (2003) *Curating Archaeological Collections: From the Field to Repository*. Archaeologist's Toolkit Volume 6. Walnut Creek, CA: AltaMira Press.
- Swain, H. (1996) Here comes a national museums crisis. *British Archaeology*, 12: 11.
- (1998) *A Survey of Archaeological Archives in England*. London: Museums and Galleries Commission and English Heritage.
- (2002) The ethics of displaying human remains from British archaeological sites. *Public Archaeology*, 2: 95–100.
- (2006) Archaeological archives in Britain and the development of the London Archaeological Archive and Research Centre. In: N. Agnew and J. Bridgland (eds.), *On the Past, for the Future: Integrating Archaeology and*

- Conservation. Proceedings of the Conservation Theme at the 5th World Archaeological Congress, Washington, D.C., 22-26 June 2003*. Los Angeles: The Getty Conservation Institute, pp. 211–15.
- (2007) *An Introduction to Museum Archaeology*. New York: Cambridge University Press.
- Tahan, L.G. (2004) The archaeology of ethnicity in Lebanon: the case of the National Museum of Beirut. *Archaeological Review from Cambridge*, 19(2): 102–17.
- (2005) Investigating colonialism and post-colonialism in the archaeological museum space: the case of the Lebanon and France. In: C. Briault, J. Green, A. Kaldelis and A. Stellatou (eds.), *SOMA 2003. Symposium on Mediterranean Archaeology*. BAR International Series 1391. Oxford: Archaeopress, pp. 151–55.
- Tate, J., Reiche, I., Pinzari, F., Clark, J. and Caldwell, D. 2011. History and surface condition of the Lewis Chessmen in the Collection of the National Museums Scotland (Hebrides, late 12th-early 13th centuries). *ArchéoSciences: revue d'archéométrie*, 28: 249–58.
- ter Keurs, P. (2011) Agency, prestige and politics: Dutch collecting abroad and local responses. In: S. Byrne, A. Clarke, R. Harrison and R. Torrence (eds.), *Unpacking the Collection: Networks of Material and Social Agency in the Museum*. New York: Springer, pp. 165–82.
- Thompson, R.H. (2000) The crisis in archaeological collection management. *CRM*, 5: 4–6.
- Trimble, M.K. and Marino, E.A. (2003) Archaeological curation: an ethical imperative for the twenty-first century. In: L.J. Zimmerman, K.D. Vitelli and J. Hollowell-Zimmer (eds.), *Ethical Issues in Archaeology*. Walnut Creek, CA: AltaMira Press, pp. 99–114.
- Tubb, K.W. ed. (1995) *Antiquities Trade or Betrayed. Legal, Ethical and Conservation Issues*. London: Archetype.
- Tubb, K.W. and Brodie, N. (2001) From museum to mantelpiece: the antiquities trade in the United Kingdom. In: R. Layton, P.G. Stone and J. Thomas (eds.), *Destruction and Conservation of Cultural Property*. London: Routledge, pp. 102–16.

- Tully, G. (2011) Re-presenting ancient Egypt: reengaging communities through collaborative archaeological methodologies for museum displays. *Archaeological Review from Cambridge*, 26(2): 137–52.
- Turnbull, P. (2002) Indigenous Australian people, their defence of the dead and native title. In: C. Fforde, J. Hubert and P. Turnbull (eds.), *The Dead and their Possessions: Repatriation in Principle, Policy and Practice*. London and New York: Routledge, pp. 63–86.
- Vaudou, M.-O. (2004) Inventory and global management in archaeology: the example of the Neuchâtel Museum. *Museum International*, 56(3): 68–76.
- Vergo, P. ed. (1989) *The New Museology*. London: Reaktion Books.
- Watson, P. and Todeschini, C. (2006) *The Medici Conspiracy: The Illicit Journey of Looted Antiquities, From Italy's Tomb Raiders to the World's Greatest Museums*. New York: Public Affairs.
- White, A.J. ed. (1986) *Dust to Dust? Field Archaeology and Museums. Conference Proceedings Vol. II*. Society of Museum Archaeologists.
- Whitehead, C. (2009) *Museums and the Construction of Disciplines: Art and Archaeology in Nineteenth-Century Britain*. London: Duckworth.
- Wilson, D.M. (1989) *The British Museum: Purpose and Politics*. London: British Museum Publications.
- Wingfield, C. ed. (1993) *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for Use in England, Wales and Northern Ireland*. Society of Museum Archaeologists.
- Wood, B. (1996) Wot! No dinosaurs? Interpretation of prehistory and a new gallery at the Museum of London. In: A. Devonshire and B. Wood (eds.), *Women in Industry and Technology from Prehistory to the Present Day. Current Research and the Museum Experience. Proceedings from the 1994 WHAM Conference*. London: Museum of London, pp. 53–63.
- Wright, G. ed. (1996) *The Formation of National Collections of Art and Archaeology*. Washington, D.C.: National Gallery of Art.
- Xiang, H., Meng, X and Yang, C. (2003) Design and implementation of digital archaeology museum of Shandong University. *Journal of System Simulation*, 15(3): 319–21.