



McDONALD INSTITUTE CONVERSATIONS

Authenticity and cultural heritage in the age of 3D digital reproductions

Edited by Paola Di Giuseppantonio Di Franco,
Fabrizio Galeazzi and Valentina Vassallo



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CONTENTS

| | |
|--|-----|
| Contributors | vii |
| Figures | ix |
| Foreword | xi |
| <i>Introduction: Why authenticity still matters today</i> | 1 |
| PAOLA DI GIUSEPPANTONIO DI FRANCO, FABRIZIO GALEAZZI AND VALENTINA VASSALLO | |
| Defining authenticity | 1 |
| Materiality vs constructivism | 2 |
| Object biographies | 3 |
| Authority and power | 3 |
| Experience and performance | 4 |
| Structure of the book | 5 |
| Part 1 Histories | 11 |
| <i>Chapter 1 Cast aside or cast in a new light? The Maudslay replica Maya casts at the Museum of Archaeology and Anthropology, Cambridge</i> | 13 |
| JODY JOY AND MARK ELLIOTT | |
| The Maudslay casts | 14 |
| Changing meanings | 22 |
| Contemporary role of replicas | 22 |
| Conclusions | 23 |
| <i>Chapter 2 Authenticity and realism: virtual vs physical restoration</i> | 25 |
| LOLA VICO LOPEZ | |
| Concepts and terminology | 25 |
| Principles and norms used in physical restoration and their relevance to the virtual environment | 27 |
| Towards a method for virtual restoration | 29 |
| Case studies | 30 |
| Concluding remarks | 32 |
| Part 2 Definitions | 35 |
| <i>Chapter 3 Digital Authenticity and the London Charter</i> | 37 |
| SORIN HERMON AND FRANCO NICCOLUCCI | |
| The London Charter – preamble and current situation | 38 |
| The London Charter principles | 39 |
| Summary and conclusions | 44 |
| <i>Chapter 4 Digital heritage objects, authorship, ownership and engagement</i> | 49 |
| STUART JEFFREY | |
| Authorship and ownership | 49 |
| Transience | 53 |
| Future recording | 54 |
| Conclusion | 54 |
| Part 3 Practices | 57 |
| <i>Chapter 5 Evaluating authenticity: the authenticity of 3D models in archaeological field documentation</i> | 59 |
| PETER JENSEN | |
| Observation and interpretation in archaeology | 60 |
| Conceptualized authenticity in archaeological documentation | 64 |
| Conclusion | 72 |

| | | |
|-------------------|---|-----|
| <i>Chapter 6</i> | Virtual authority and the expanding role of 3D digital artefacts | 75 |
| | KEVIN GARSTKI | |
| | Photography and its similarities to 3D scanning | 75 |
| | Case study 1 | 77 |
| | Case study 2 | 78 |
| | Discussion | 79 |
| <i>Chapter 7</i> | Volatile images: authenticity and representation and multi-vocality in digital archaeology | 83 |
| | GARETH BEALE | |
| | Mediating authenticity | 83 |
| | Case study 1: Basing House zine printing | 85 |
| | Case study 2: Microlith | 88 |
| | Case study 3: Re-reading the British Memorial | 90 |
| | Conclusion | 92 |
| Part 4 | Uses | 95 |
| <i>Chapter 8</i> | Ektypa and 3D models of Ektypa: the reality(ies) of a digital object | 97 |
| | ELENI BOZIA | |
| | Thoughts on authenticity | 98 |
| | Digital epigraphy: a new version of epigraphy or a new-found authenticity | 100 |
| | Copy vs. original: how a copy verifies the original | 102 |
| | Conclusion | 108 |
| <i>Chapter 9</i> | Theorizing authenticity – practising reality: the 3D replica of the Kazaphani boat | 111 |
| | NICOLA AMICO, P. RONZINO, V. VASSALLO, N. MILTIADOUS, S. HERMON AND F. NICCOLUCCI | |
| | The 3D replica of the Kazaphani boat. A case study of a fragile archaeological artefact | 112 |
| | Visitor's experience: 'A wonderful deception!' | 118 |
| | Conclusions | 120 |
| <i>Chapter 10</i> | Pitoti Prometheus, virtual reality 360: Valcamonica rock art between naturalism and alienation | 123 |
| | FREDERICK BAKER | |
| | Digital vs virtual | 123 |
| | Naturalism – recording rock art | 125 |
| | Naturalism and authenticity – the fourth dimension, time | 127 |
| | Alienation | 128 |
| | Arts-based research | 129 |
| | Conclusion | 132 |
| Index | | 135 |

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Figures

| | | |
|------|---|-----|
| 1.1 | <i>Stela E from Quirigua; old MAA, Little St Mary's Lane, Cambridge, 1885.</i> | 15 |
| 1.2 | <i>The Maudslay Hall, MAA, c. 1970, showing the Winchester Cathedral choir screen and the Maudslay casts including Zoomorph P</i> | 16 |
| 1.3 | <i>Casts, Maudslay Gallery, either side of the Haida totem pole.</i> | 16 |
| 1.4 | <i>Zoomorph B from Quirigua; entrance corridor to the Babington Gallery.</i> | 18 |
| 1.5 | <i>Dismantling the cast of Zoomorph P for transport to London. Summer 1979.</i> | 19 |
| 1.6 | <i>Dismantling the cast of Zoomorph P for transport to London. Summer 1979.</i> | 19 |
| 1.7 | <i>New display, Andrew's Gallery of World Archaeology; cast of Stela E from Quirigua.</i> | 20 |
| 1.8 | <i>Casts from lintel 16 of House F at Yaxchilan, Mexico; now on the wall of the Clarke Gallery.</i> | 21 |
| 2.1 | <i>Outline detail of the method of analysis for hypothesis elements in architectural 3D restoration.</i> | 29 |
| 2.2 | <i>Triclinium after the restoration work, 1937; drawing by Cacchiattelli-Cleter 1865.</i> | 30 |
| 2.3 | <i>MidasGen, stresses sig. Z-Z, X-X; structural analysis; virtual restoration.</i> | 31 |
| 3.1 | <i>The church of the Christ Antiphonitis, Kyrenia, from outside.</i> | 39 |
| 3.2 | <i>Some of the repatriated frescoes.</i> | 40 |
| 3.3 | <i>Documenting the fresco fragments.</i> | 41 |
| 3.4 | <i>3D point cloud of the interior.</i> | 41 |
| 3.5 | <i>Last judgement (northern wall). 36 fragments virtually re-located (72 per cent of the scene).</i> | 42 |
| 3.6 | <i>Tree of Jesse (southern wall). 32 fragments virtually re-located (77 per cent of the scene).</i> | 42 |
| 3.7 | <i>Last Judgement. Preserved in-situ frescoes in red, areas with missing frescoes in green.</i> | 43 |
| 5.1 | <i>Skelhøj. Rectification, mosaicking and vectorization of turf structures in a Bronze Age barrow.</i> | 62 |
| 5.2 | <i>Composite of 3D Structure from Motion documentation of human bones, alongside geological section in Alken Enge.</i> | 63 |
| 5.3 | <i>The Jelling Complex. Levels of uncertainty indicated by varying transparency.</i> | 65 |
| 5.4 | <i>The Jelling Complex. Excavated areas shown in white.</i> | 66 |
| 5.5 | <i>Plan drawings of postholes show the architectural similarities between viking age buildings.</i> | 67 |
| 5.6 | <i>Photos of the reconstructed houses at Trelleborg and Fyrkat.</i> | 68 |
| 5.7 | <i>Archaeo online database.</i> | 69 |
| 5.8 | <i>3D model of the planned physical palisade reconstruction and exhibition wall backdrop.</i> | 70 |
| 5.9 | <i>DR News online depicting the Borgring visualization.</i> | 71 |
| 6.1 | <i>Three digital 3D models of a Herakles head from Athienou-Malloura.</i> | 78 |
| 6.2 | <i>3D model of a Roman lamp reproduction, photogrammetry.</i> | 79 |
| 6.3 | <i>The initial 3D model of a Roman lamp reproduction; the altered 3D model using Adobe Photoshop.</i> | 79 |
| 7.1 | <i>GCI rendering of a room interior from Basing House; one of the digital image types to be included in the zines.</i> | 85 |
| 7.2 | <i>The zines.</i> | 86 |
| 7.3 | <i>Centrefold layout of prints and drawings by Peter Driver and students displayed in Volume 4 of the Basing House pamphlets.</i> | 87 |
| 7.4 | <i>Games and things to find on site.</i> | 88 |
| 7.5 | <i>The microlith.</i> | 89 |
| 7.6 | <i>RTI of an incised stone captured during a Re-Reading the British Memorial church survey.</i> | 90 |
| 7.7 | <i>Normal map; one of several imaging modes available easily to the viewer of an RTI file.</i> | 91 |
| 8.1 | <i>Scriptorium monk at work.</i> | 98 |
| 8.2 | <i>Court of Casts in the Victoria and Albert Museum.</i> | 99 |
| 8.3 | <i>Illustration of the Digital Epigraphy Toolbox's 3D digitization process.</i> | 102 |
| 8.4 | <i>Illustration of the analysis of lettering techniques.</i> | 102 |
| 8.5 | <i>1907 Cornell expedition making an ektypon at Quru Bel, Arslan Tash.</i> | 103 |
| 8.6 | <i>Ektypa of the Res Gestae of the emperor Augustus.</i> | 103 |
| 8.7 | <i>Ektypa of the Res Gestae of the emperor Augustus.</i> | 104 |
| 8.8 | <i>Photograph of the Res Gestae inscribed on the Monumentum Ancyranum, Ankara, Turkey, 1883.</i> | 105 |
| 8.9 | <i>Res Gestae of the emperor Augustus: 3D model of the Ektypa.</i> | 106 |
| 8.10 | <i>Visualization of the 3D ektypon with the original ektypon surface.</i> | 107 |
| 9.1 | <i>From the real artefact to the 3D physical replica.</i> | 112 |

| | | |
|------|---|-----|
| 9.2 | <i>The 3D scanning of the Kazaphani model boat.</i> | 113 |
| 9.3 | <i>Creation of the 3D digital model.</i> | 114 |
| 9.4 | <i>The replica of the Kazaphani model boat in two pieces.</i> | 115 |
| 9.5 | <i>The completed assembly of the two pieces.</i> | 115 |
| 9.6 | <i>Engraving the marks of the joints from previous conservation.</i> | 116 |
| 9.7 | <i>Application of the binder agent.</i> | 116 |
| 9.8 | <i>The colouring of the replica.</i> | 117 |
| 9.9 | <i>Details of the 3D replica.</i> | 118 |
| 9.10 | <i>The 3D replica exhibited at the Smithsonian behind glass.</i> | 119 |
| 10.1 | <i>Prometheus on Seradina 12a. Still from 'Pitoti Prometheus' Dir. Baker 2016.</i> | 124 |
| 10.2 | <i>Sunset on Seradina 12a with ploughing scene.</i> | 126 |
| 10.3 | <i>Baker Illus 3 'The Hunt' Dir. Kren 2012.</i> | 129 |
| 10.4 | <i>'The Gladiators' Animation Production still for 'Pitoti Prometheus' Dir. Baker 2016</i> | 131 |
| 10.5 | <i>Baker Illus 4 The Plough. Animated preproduction still from 'Pitoto Prometheus' Dir. Baker 2016.</i> | 131 |

Chapter 1

Cast aside or cast in a new light? The Maudslay replica Maya casts at the Museum of Archaeology and Anthropology, Cambridge

Jody Joy and Mark Elliott

On the second or third day of one of the writer's first job as a museum curator he was shown around a store. At the end of the tour there was one area he had not visited. When he asked his new colleague 'what's in there?' their reply was 'only casts, let's not bother'. To his shame, it took him a few months to venture into that room and when he did he was greeted by a myriad of casts of objects from assorted periods and locations.

These two reactions, ambivalence from one museum professional contrasted with fascination at an eclectic mix of old casts by another, exemplify some contemporary attitudes towards replicas. On the one hand, 'they are only replicas'. They are mere copies and not as valuable as 'authentic' objects from the past. With increasing pressure on store space, following this viewpoint many museums and other institutions have discarded their collections of replicas to make room for so-called authentic objects. On the other hand, replicas such as casts possess a certain attraction or charm. They are relics from a bygone age, produced using outmoded technology, standing in stark contrast to the new digital techniques employed to create ultra-modern replicas such as 3D prints. Some replicas are also valued as sources of information about 'authentic' objects which are now lost or have been damaged or transformed. Replicas then, occupy an indeterminate state. They are copies and therefore seen as not as valuable as 'genuine' objects from the past. Yet many are now quite old, with their own biographies, contexts of creation and use, and are objects worthy of study in their own right.

In this chapter, we examine the use of replicas in museums and for other purposes such as teaching before the advent of digital technologies. Many different types of replica exist and each object and each category of replica has its own history which it is not possible to reproduce in a single book chapter. Instead, we have chosen to focus on a single case study, a group of plaster

casts of Classical Maya monuments at the Museum of Archaeology and Anthropology (MAA), University of Cambridge, where they have come to be known as the 'Maudslay Casts'. Through this case study we will show how attitudes towards replicas in general – and these replicas in particular – have changed over time. We will conclude by questioning what future roles the casts might have in a digital world.

Studies tracing the biographies of 'authentic' objects have often been conceptually split between the context in which the artefact was originally made, used and discarded and their 'afterlives' following their re-discovery and incorporation into archaeological narratives and institutions such as museums (see Joyce 2015). Following the lives of replicas has the apparent advantage that there is no tension between their 'original' context and 'afterlife'. But as we will show, it is not so simple. The antiquity and complex life stories of some artefacts that were at least created as 'replicas' can often reveal particular tensions and contradictions that are worthy of scholarly attention, and which certainly impinge upon curatorial practice. We also have in mind Joy's (2002) observation that something of the 'aura' of the original can be passed on to a replica given a particular set of circumstances, and indeed Alfred Gell's conception of the art index and the tensions between replica and prototype, as well as what he describes as the 'distributed agency' of a maker through her artwork, which may perhaps be equally attributed to the artwork through its 'copy' (Gell 1998; Chua & Elliott 2013). Throughout our discussion, we subscribe to Latour's (1999) 'circulating reference' – the notion that the translation and articulation of relations surrounding objects produces references, that themselves circulate, accumulate and interact. Latour's analytical model and his ethnographic object is the pedocomparator – a grid that abstracts soil samples from their 'reality' (in this case the Amazonian

rainforest) and recombines them to make that reality more visible and analytically accessible. The potential analogues for museums and replicas – particularly those Maudslay made in another forest in the Americas – are manifold.

The Maudslay casts

Among the first objects accessioned into the collections of MAA, in 1884, were a group of monumental plaster casts of Maya sculpture, taken during Alfred Maudslay's expeditions to the sites of Quirigua in Guatemala and Yaxchilan in Mexico. Like casts of Classical sculpture, the Maudslay Casts were reproductions of originals which were otherwise unobtainable, or inaccessible to scholars and students at Cambridge.

Classic Period Maya (AD 250–900) sculpture was primarily made from limestone and was intended for public display and ritual use. It took various forms ranging from large upright *stelae* erected in plazas and courtyards in Maya cities, to wall panels or door lintels occupying the interiors of palaces and temples. Images included portrayals of deities, rituals and ceremonies and depictions of rulers, with hieroglyphic texts often accompanying such scenes (Fash 2004, 6; Houston & Inomata 2009, 91).

Maya sites were never really 'lost' but they were difficult to access under Spanish control and overgrown by dense vegetation. But by the mid-nineteenth century they became more accessible to foreign visitors under new national governments in Guatemala and Mexico (Houston & Inomata 2009, 11). An illustration of the interest in these sites is that in 1854, enquiries were made by the British consul in Guatemala to report on the feasibility of removing pieces of Maya sculpture. The prime minister at the time, Lord Palmerston, was anxious that Britain should not lose out on these objects at the expense of countries such as the United States. But a report on the feasibility of moving the sculptures concluded they were too heavy and it would be too expensive to remove them to Britain (Graham 2002, 79).

By the late nineteenth century, independent researchers such as Maudslay, as well as institutions like the Peabody Museum at Harvard University, began to document and record Classic Maya sites (Houston & Inomata 2009, 11). Maudslay was a Cambridge graduate and spent some time in the colonial service in Fiji, Tonga and Samoa. Swapping careers, he resigned from overseas service in 1880 and travelled to Guatemala later that year with the intention of exploring and recording Maya sites, organizing six expeditions to Guatemala and Mexico over the next thirteen years (Graham 1993, 70). Writing a decade after his first visit to the ruined Maya city of Quirigua in Guatemala, Maudslay wrote,

'it was the unexpected magnificence of the monuments which that day came into view that led me to devote so many years securing copies of them, which, preserved in the museums of Europe and America, are likely to survive the originals' (quoted in Graham 2002, 82). While these reflections, separated by years of activity from the original encounter or indeed the production of the casts themselves, must be treated with caution, the impact of the casts on Maudslay and his motivations is evident. Nevertheless, it is clear as Graham (1993) asserted, Maudslay's intention when making his casts was to '...have them displayed for educational and scientific purposes, and second, to ensure that the images, threatened by erosion, would be preserved indefinitely' (Graham 1993, 71). A third motivation is also apparent. Maudslay was a keen photographer but the variable jungle light made it impossible to precisely capture the detail and deep relief of the sculptures using the photographic technologies of the time. The heat and humidity were also less than ideal conditions for draftsmen to produce the accurate line drawings that Maudslay required (Graham 2002, 108). Taking casts allowed accurate drawings to be made, away from the jungle in good working conditions (Graham 1993, 71).

Since it had already proved impractical and too costly to remove objects, it was also seen as a good deal easier to make casts. Nevertheless, one should not underestimate the difficulties involved. Maudslay understood that taking casts was a highly skilled task and on planning his second expedition employed the services of Lorenzo Giuntini, a professional *formatore* or plaster-worker based in London who served the still vibrant market for plaster reproductions of classical antiquities. In preparation for the expedition nearly four tons of Plaster of Paris was purchased which was specially packed and delivered to Guatemala well ahead of time (Graham 2002, 110). The methods used to create casts and moulds were difficult and time consuming and Fash (2004) described well the conditions and considerable effort expended to create them and get them back:

Hauling reams of paper, plaster, and supplies; labouring in uncomfortable jungle conditions to make the paper moulds; drying them by huge fires; and transporting them over trails on mule back or by labourers without damage required a staunch perseverance on the part of these explorers and moulders (Fash 2004, 11).

Back in London in the summer of 1884, the moulds were laboriously reassembled by Giuntini to reconstruct each monument, before the full-sized plaster

casts could be made. This created accurate but large, heavy and fragile plaster casts which, as we will see, are far from ideal for museum storage and display. At the time Maudslay and Giuntini were producing their casts other institutions such as the Peabody, the Smithsonian Institution and Berlin Museum collaborated and competed with one other to sponsor expeditions to produce their own casts (Fash 2004; Shields 2015). As Fash (2004) stated in relation to the casts of Aztec and Maya sculpture in the Peabody Museum at Harvard University, ‘often lost upon us today is the tremendous investment not just of time, effort, and planning that went into producing and transporting the moulds and casts, but the financial investment’ (Fash 2004, 8). This shows just how valued casts were at this time amongst leading institutions and the public, with casts and photographs appearing prominently in public expositions such as the Chicago Worlds Columbian Exposition of 1893, which were seen by millions of people (Shields 2015, 30–3, Fig. 2.2). Plaster casts provide a precise one-to-one replica that is aesthetically pleasing. Once the moulds have been taken, plaster is relatively cheap and multiple copies can be produced. Casts also have considerable didactic value as it is possible to display many different objects side by side for comparison.

The casts at MAA

The casts were presented to the Museum by Maudslay soon after they were made, late in 1884, only months after the institution had been established. They are contemporaneous with some of the casts of Classical sculpture (later to become part of the collections of the Museum of Classical Archaeology) which were exhibited in the adjoining galleries (Beard 1994).

The following history of the casts has been compiled using evidence gleaned primarily from Museum Annual Reports and other archival documents. The casts were first displayed in Gallery H of the then Museum of Classical and General Archaeology, located on Little St. Mary’s Lane (Annual Report 1885). As is shown in Figure 1.1, the skylight of the original building had to be adjusted to accommodate the tallest stela, and the casts occupied an enormous area of the gallery. In a letter from Maudslay to the then curator of the Museum, Baron Anatole von Hügel, marked ‘Sunday 1885’, he remarked on the display: ‘the casts look wonderfully well. I only wish they would build a new museum five times as big and they should have the splendid collection I have now on the way to England’.

There the casts stayed until a new building was constructed for the Museum on Downing Street, following a split from the classical archaeology collections (Beard 1994). Owing to their ‘unwieldy bulk’, the

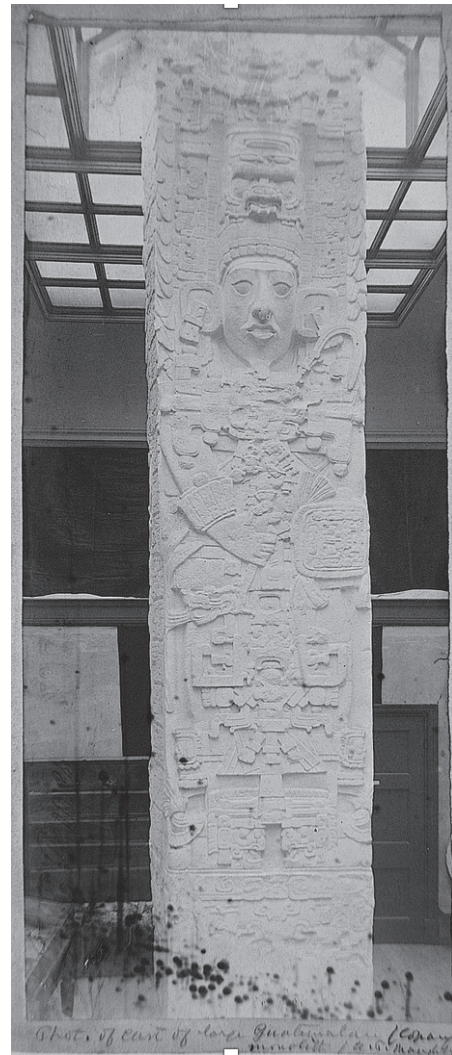


Figure 1.1. *Stela E from Quirigua in the old Museum of Archaeology and Anthropology, Little St Mary’s Lane, Cambridge, 1885.*

casts were some of the first objects to be relocated and were in position by the spring of 1912 (Annual Report 1912), well ahead of the official opening in 1913. In fact, the main hall of the new museum was especially designed for the American exhibits, specifically the accommodation of the larger objects including the Maudslay Casts (Annual Report 1911). Here there was space to accommodate the 10 metre-high stelae, and the enormous zoomorphic sculptured rock could be seen from every angle from the mezzanine above (Fig. 1.2). The design of this striking space also proved useful when the Museum finally acquired its longed-for Haida totem pole in 1925 (Fig. 1.3).

The large gallery was even named after Alfred Maudslay in tribute to his many donations to the



Figure 1.2. *The Maudslay Hall, MAA, c. 1970, showing the Winchester Cathedral choir screen and the Maudslay casts including Zoomorph P.*



Figure 1.3. *Casts seen in the Maudslay Gallery located either side of the Haida totem pole. Photograph taken by Gwil Owen c. 1978.*

Museum but the casts were specifically singled out in the annual report:

...Mr Maudslay subsequently enriched the Museum with a set of magnificent casts of Guatemalan sculptured monuments taken by himself from the originals... This museum is the only one in the country in which such important illustrations of American archaeology are exhibited (Annual Report 1913).

As a further illustration of the importance of the casts to the Museum, one of the objects, a cast of 'Zoomorph B' from Quirigua, Guatemala, was built into the wall above the entrance of the corridor from the Maudslay Hall to the Babington Gallery (Fig. 1.4).

The annual reports make it clear that by 1920, although the Museum was open to students and the public, following the move, artefacts had still not been fully unpacked and displayed. For example, one of the galleries was being used as a store room and the Maudslay Hall continued '...to show the miscellaneous, unsorted mass of specimens, which were there stored for safekeeping at the time of the removal of the Museum from Little St. Mary's Lane' (Annual Report 1920). In June 1920 the Board of Anthropological Studies and the Antiquarian Committee were amalgamated and reconstructed as the Board of Archaeological and Anthropological Studies and on the 24 November the newly formed Board indicated their desire to recruit more students (Annual Report 1920). As a result, more space in the Maudslay Hall was given over to teaching university students with galleries and didactic displays laid out specifically for them. Subsequently, the Maudslay Casts now had to share space with the local archaeology collections and a hotchpotch of other objects from the Swiss Lakes, the Near East and China.

Parallel, yet different, trajectories can be seen for the related collection of Maudslay's plaster casts and paper squeeze moulds at the British Museum (Joyce 1938). Maudslay originally donated the casts to the South Kensington Museum (now the Victoria and Albert Museum) in 1886 and they were displayed for a short time before they were dismantled and placed in storage, with discussions soon initiated to negotiate the transference of the casts to the British Museum (Joyce 1938). According to Shields (2015, 36), this was very much against Maudslay's wishes and he attempted to transfer many of the South Kensington casts to Cambridge. This proposal was rejected by Cambridge on the grounds of the costs of the long-term display of such large objects. The discussions between the South Kensington and British Museums continued for 30

years or so until the casts finally officially became part of the British Museum's collections in 1922 and it was not until 1923 that any of the casts were put on public display (Joyce 1938, 6). Significantly, just as at MAA, Maudslay's contribution to Maya archaeology was also recognized at this time as the casts were set up in a space known as The Maudslay Room (Graham 1993, 73).

During the Second World War many objects from MAA were removed for safekeeping, some were taken to south Wales and others to a chalk cave in the nearby Cambridgeshire village of Balsham. The Museum was closed for a while in 1939 following the outbreak of war, but after it became clear that Cambridge was not in immediate danger, it reopened with objects '... arranged in such a way that... [they] could be quickly packed again if necessary' (Annual Report 1945–6). The dispersal of the collections during the war provided the opportunity for carrying out an extensive programme of re-organizations. The Maudslay Hall was once again devoted to American archaeology and ethnography containing, '...the Maudslay collection of large Central American casts and the British Columbian totem pole...' (Annual Report 1945–6). The re-organizations and refurbishments were largely completed by November 1947 and the Maudslay Hall re-opened to the public in July 1948.

There are few remarks about the Maudslay Hall in the annual reports throughout the 1950s and 1960s except for a mention in the 1955 annual report that the gallery was redecorated for the first time since the Museum was built!

Cast aside?

Major alterations to the Museum were undertaken in the mid-1970s when the collections were significantly reorganized and a long-term plan for display was instigated. Between 1975 and 1976 much of the collection in store was relocated to a new store at the old Shorts Factory on Madingley Road and in 1977 three of the six galleries at the Museum were converted into storage and office space.

Reorganization of displays and collections were not the only changes that occurred at this time. Visitor numbers are reported in the annual reports for the first time and more members of staff were recruited. Prior to this period much museum work was undertaken by honorary keepers – unpaid period and regional experts who gave up their time to curate specific collections. These changes are reflective of a move towards professionalization and a growing concern for accommodation of the general public as well as university students.

By the late 1970s, prompted by the continuing growth of the collections and this professionalization



Figure 1.4. Zoomorph B from Quirigua, Guatemala built into the entrance corridor to the Babington Gallery (Museum Accession Number 1885.3.8). Photograph by Josh Murfitt, August 2016.

of activities at the Museum, a radical reorganization of the Maudslay Hall was also proposed and it was to become the ethnography gallery. Both as big, dominant unwieldy things, and as ‘archaeological’ objects, but also perhaps because they weren’t ‘real’, the casts were no longer a good fit. This marked the beginning of the end for the display of the casts in the Maudslay Hall and several options were suggested for their removal from display, from transplantation to the lawn outside the Museum, to disposal.

Advice was sought from several experts as to the historical value of the casts. For example, in a letter in the archives dated 18 October 1976, one expert from the Institute of Archaeology, London, Warwick Bray, stated:

They are good casts, and in some cases I believe they show detail which has deteriorated on the original monuments... they can be studied in the same way as the originals

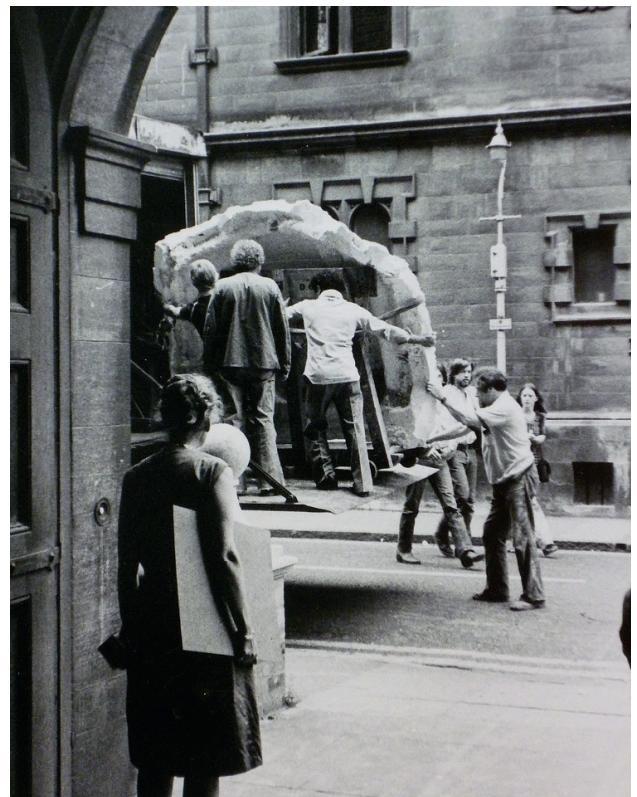
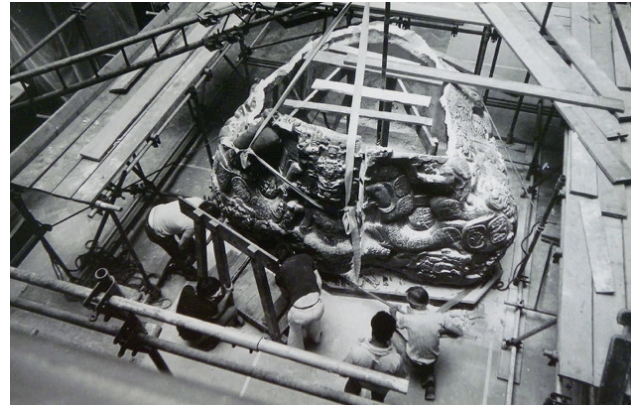
and much better than photos. There is hardly any material of this country for students to look at. Would you consider disposing of original stelae? If not, you should keep these. For teaching, study, and sheer tourism they are almost as good as the originals, which will never leave Guatemala. In fact, they are considerable treasures in their own right – even if they are big and clumsy and take up space which could accommodate yet more Polynesian clubs or Saxon pots. Treat them with respect.

In a letter dated 28 October 1976 Professor Gordon Willey of the Peabody Museum expressed similar sentiments and provided information about the fate of similar casts in his own institution:

The casts which you describe from the Cambridge Museum are pieces of considerable scientific value. There are not many such casts anywhere. Indeed, it may be that yours and ours are the only ones in existence on these particular pieces. We, too, have been concerned what to do with our Maya casts. Many of them, especially those from Quirigua, are extremely large and they take up a lot of room. We have removed some to storage, others still remain on exhibit, but we have not destroyed or jettisoned any of them... In brief, I strongly recommend that you maintain possession of these casts either on display or in storage.

In the end, the value of the casts was recognized and they were not destroyed, instead they were deconstructed and distributed once again. The zoomorph was sent on long-term loan to the Museum of Mankind in London (Figs. 1.5 & 1.6), and the stelae were cut into panels and moved to a new purpose-built location in the Museum's external store. It is worth quoting the 1979 annual report at length as it provides a good indication of the work this involved:

The Maudslay Gallery was prepared for the removal of the Mayan casts, which, because of the amount of disruption involved, meant that the Museum had to be closed from 18 June until end of September. The sky god was cut into sections and removed to the Museum of Mankind between 18 and 21 June. On 22 June Mr Smith, Mr Baynes, Mr Osbourne and Mr Lewis began to dismantle the remaining casts. This operation was



Figures 1.5 & 1.6. *Dismantling the cast of Zoomorph P for transport to London. Summer 1979. MAA Archives.*

completed on 17 August... The removal of the casts was only possible because the General Board also gave approval for the construction of a large extension of the Shorts store, part of which was designed to house them in sections. Construction at Shorts went on concurrently with the work in the Museum and was sufficiently completed to receive the casts on schedule (Annual Report 1979).

A number of the letters in the archives providing advice as to what should be done with the casts also tell us about the fate of similar casts in collections elsewhere. As professor Willey's letter quoted above shows, some of the casts in the Peabody Museum were removed to storage and published accounts elsewhere show that some were also moved to other institutions or even destroyed (Fash 2004, 13). Another letter from the American Museum of Natural History, New York stated that in a refurbishment during the 1960s, although some of the larger casts were retained – with the ceiling of the exhibition hall raised to accommodate them – several other large casts from Quirigua were destroyed.

Throughout their time in the Maudslay Hall there are few mentions of how the casts were received by students and members of the public. The remaining photographs of the casts on display show they occupied an imposing position in the gallery and no doubt made a notable impression on students and visitors. It is impossible to determine how many people they

may have inspired but we do know that Maudslay's studies and the casts he commissioned made a significant contribution to the decipherment of Maya hieroglyphs throughout the twentieth century (Elliott & Thomas 2011, 69).

Cast in a new light

The majority of the casts still remain in the Shorts Store today. MAA was extensively refurbished again in 2012, culminating in the creation of a new front door, special exhibitions gallery, museum shop and the refurbishment of the Clarke and Andrews Galleries. As a symbol of the importance of the Maudslay Casts to the history of the museum, a display was created in the newly refurbished Andrews Gallery of World Archaeology, where a cast of Stela E from Quirigua, Guatemala depicting the face of king K'ak' Tiliw Chan Yopaat and part of his headdress is displayed alongside contextual information highlighting the importance of the casts and Maudslay's contribution to Maya



Figure 1.7. A new display in the Andrew's Gallery of World Archaeology, featuring a section of the 1883 cast of Stela E from Quirigua, Guatemala. Photograph by Josh Murfitt, August 2016.



Figure 1.8. A cast taken from lintel 16 of House F at Yaxchilan, Mexico, is now suspended high up on the wall of the Clarke Gallery. Photograph by Josh Murfitt, August 2016.

archaeology (Fig. 1.7). Here the replica is cast in a new light, telling a story of the Museum and a revaluing of the activities of collectors and collecting. The casts have become objects with complex biographies and indeed biographical objects (Hoskins 1998) – part of an assemblage that creates a distributed biography of Maudslay and the Museum. A section of one of the casts taken from lintel 16 of House F at Yaxchilan, Mexico, is also now suspended high up on the wall of the Clarke Gallery above books sold in the museum shop (Fig. 1.8), as part of a group of objects themed as ‘welcome’ or ‘entrance’ artefacts – from a Kanak door post from New Caledonia to a statue of Ganesha from India. Contextual information about the cast is limited but at least people are able to see it and its prototype’s

previous position as part of an entrance way (in the mind of the curator) is to some extent perpetuated.

The re-display of some of the casts at MAA is reflective of a wider trend which has seen other institutions re-assess and re-value their collections of plaster casts. For example, following a stock-taking of their cast collection, in 2001 the Peabody Museum opened a new exhibit titled *Distinguished Casts: Curating Lost Monuments at the Peabody Museum* (Fash 2004, 4). Regardless of major changes in the archaeological knowledge by which they were originally understood, the casts are still of considerable interest to academics and continue to be objects of knowledge creation. In the years since Maudslay made his casts, the monuments have suffered from damage, vandalism, weathering and erosion and

some details recorded in the casts are no longer visible on the originals (Elliott & Thomas 2011, 69). Consequently, there has been a renewed academic interest in the Maudslay Casts, for example with scientists from the University of Bonn undertaking a project to digitally scan each of the casts during the summer of 2016.

Despite this renewed interest the casts still represent a considerable curatorial challenge. As a survey of the casts made by Maudslay held at the British Museum revealed, they are not immune to the effects of time (Mathews 1999). They are fragile but heavy objects and are particularly susceptible to damage when they are moved and they require innovative storage solutions if they are to be preserved into the future.

Changing meanings

The casts index an intriguing period in the history of archaeology and the Museum. Maudslay is one of the great names in the history of Maya archaeology and the casts and photographs he brought back from his expeditions were one of the bases for the decipherment of Maya texts. The casts will therefore always be associated with his achievements. They are a record of monuments that have subsequently been damaged and preserve details which no longer survive on the originals. They also tell us about outmoded techniques of artefact replication and hint at the ethics, or practicalities that made Maudslay produce casts, rather than transplant the originals to Britain.

The Maudslay Casts have been in the Museum's collections almost since its foundation and they are part of its story; they have had a tangible impact on the fabric of the building and its efficacy as an institution. The decision first to modify an existing building and second to design a new one able to accommodate the casts, demonstrates their fundamental importance in the early years of the Museum. It also tells us something about the position of the replica in the late nineteenth century, suggesting that authenticity meant something different and to really *see* an object may have meant something rather different to museum-goers then than it does today.

The values placed on the casts changed over time and varied between institutions. For example, Shields (2015, 37) suggested that part of the reason why there was a delay in the transference of the casts from the South Kensington Museum was that at that time at the British Museum there was a 'hierarchy of cultural objects', whereby less value was placed on Mesoamerican artefacts than those from the Classical World.

By the mid-late twentieth century, different institutions tackled the challenges of displaying and accommodating such large objects in different ways, set

against a backdrop of extensive pressure on museum space and a revaluing of objects in favour of 'authentic' artefacts. At MAA the casts that were not built into the building were cut up and removed to storage. Letters in the archive show their continuing survival was under considerable threat at this time, but in the end the Museum and University provided extensive investment to ensure their continuing preservation. Nevertheless, changing priorities of the Museum and wider attitudes in favour of authentic objects at the expense of replicas meant that the casts were consigned into storage for 30 years, where the majority still remain today. The recent re-display of a section of one of the casts owes as much to its power to tell a story of the Museum itself as Maudslay's original intention that the casts should inform the general public about Maya society. Yet Maudslay's objectives are more broadly exemplified by the manner in which the casts are now valued because the originals have suffered from damage and erosion. Digital technologies such as digital scanning opens the casts up to further interpretations, facilitating new types of interaction with the casts outside of the museum and its stores.

Contemporary role of replicas

As the inclusion of replicas in a recent British Museum exhibition on the Celts demonstrates (Farley & Hunter 2015), they still have a place in museums. In this instance casts of early medieval monuments were prominently displayed as many of the 'original' objects are located in places like churchyards and cannot be removed. Like the Maudslay Casts and casts taken of statues from the Classical world (see Beard 1994), replicas are generally more 'ethical' and do not carry the same negative associations as artefacts removed from their original locations, such as the Parthenon Marbles.

One question particularly pertinent to the current discussion is how different are traditional replicas such as casts from digital reconstructions and 3D prints of objects? The casts are products of once cutting-edge but now antiquated technologies, intended to make faraway or otherwise unattainable artefacts accessible to researchers and students, in the same space as other things from other places. This brings us back to the Latourian analogy of the pedocomparator where, like the museum gallery or the grid-like shelves of the reserve collection, displacement, fragmentation and reassembly makes comparison possible. Unlike Latour's pedocomparator or the conventional image of museum collections, Maudslay and Giuntini's casts are not 'real' artefacts but simulacra: their value as evidence thus even more ephemeral, as 'better' technologies become available.

Like the production of casts, digital technologies can be costly. The scramble to take moulds and produce casts of Mesoamerican sculpture by institutions such as the Peabody Museum during the late nineteenth century, is similar to the rapid adoption of digital technologies with many institutions such as MAA undertaking programmes of object scanning and producing three dimensional representations made available to the public through platforms such as Sketchfab (<https://sketchfab.com/MAACambridge>). Like casts, once a scan has been completed many 3D prints can be produced. Significantly, this new generation of replicas is an attempt to overcome barriers to the accessibility and visibility of artefacts that originally entered museum collections in order that they could be accessible and visible to researchers and visitors. Scanning of the Maudslay casts themselves presents a new dimension to the increasingly convoluted story: replication of a replica now engaged with as an artefact like any other. One might, in passing, reflect on how much of the artefact's 'aura' is maintained in successive acts of replication.

The primary difference between traditional types of replica and digital ones is that digital technology can transport objects out of the museum into schools and people's homes. They also facilitate detailed study and close scrutiny without the need to visit dusty museum stores, providing the potential to revolutionize academic study of museum objects and greatly increase visitor access to objects currently locked away in museum stores. 3D prints also offer opportunities to transform visitor experiences. With the possibility to produce multiple replicas relatively easily and with costs coming down, handling of replica objects in museums is becoming increasingly popular.

Yet there are also disadvantages to digital technology. Traditional replicas are tangible objects. As we have seen, plaster casts have become historic objects in their own right and many are now well over 100 years old. Museums are already encountering issues related to the rapid transformation of technology, with data stored on outdated media such as floppy disks now difficult to access without specialist expertise. How accessible will digital scans of objects be in 20–30 years? Replicas like casts on the other hand will still be there in the stores, available for study. Other issues such as who owns digital data from scans also need to be ironed out as some institutions are wary of the potential exploitation of these data for commercial purposes.

Conclusions

Replicas like plaster casts do not seem to fit easily into the conventional narratives constructed about 'authentic' objects in museums. Almost always an index of

something else, something that is not really there, the replica occupies a particularly precarious position in ethnographic and archaeological collections. By charting the different paths of the Maudslay Casts, we have seen how they have lost relevance and value, as well as gained significance; moving from prized specimens to unwanted junk, back to valued objects. The social life of these casts in the museum collection vividly illustrates the fluctuating status of replicas in such a context. Like Latour's pedocomparator where soil samples are taken from the field into the laboratory, the casts have been displaced from the Guatemalan jungle to a Cambridge museum. Unlike the pedocomputer, the casts are reproductions and as a reproduction, the aura of a replica is especially vulnerable: dependent on that of its prototype, and on perceptions of the materiality of the medium itself. Yet long-term incorporation in a museum collection can also transform an object from a replica to a museum piece. The Maudslay casts are a 'hybrid mixture' (Latour 1999, 38) of ancient Maya sculpture, nineteenth-century plaster casting technology, Maudslay, and the Museum.

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