

Institution: University of Cambridge
Unit of Assessment: UoA 17a Archaeology
<p>a. Context</p> <p>A pro-active approach to impact has been a long-standing feature of Cambridge archaeology. Since the inception of an archaeology department it has worked closely with Cambridge University Museums, particularly the Museum of Archaeology and Anthropology (MAA). For the past 23 years it has operated a world-class in-house professional unit, the Cambridge Archaeological Unit (CAU). From 1997 the McDonald Institute funded a ten-year research project to inform the fight against the global trade of illicit antiquities and since 2005 it has developed the Access Cambridge Archaeology (ACA) outreach unit with its highly successful Higher Education Field Academy (HEFA). Senior Cambridge archaeologists have formally advised English Heritage since its inception, and have advised the International Council on Monuments and Sites (ICOMOS), at repeated stages over its half-century life. Our principal non-academic users fall into three groups:</p> <p>1) Learners beyond the University (school pupils, museum visitors and the interested public): We engage with the needs of UK schoolchildren and communities using both excavation- and museum-based approaches. Through instruments such as ACA and the <i>African-centred Egyptology in Prisons</i> project described in Section (b) we target diverse groups, in both the UK and internationally, and monitor the success of our efforts in a process of on-going development. The MAA and the Fitzwilliam Museum attract an international visitor community. Here and elsewhere, we draw directly on our research to design themed exhibitions, both permanent and itinerant, which in turn form a platform for international radio and TV engagement extending the reach of our impact.</p> <p>2) Custodians, curators and policy-makers: Our research has directly informed museum custodians and heritage curators and managers nationally and around the world. Examples include the Heritage Lottery Fund, English Heritage, the Portable Antiquities Scheme, the International Council of Museums (ICOM), the World Bank, ICOMOS and UNESCO. In the context of the latter, we have contributed to a number of successful or on-going bids for World Heritage Site status, and Barker, Jones and Renfrew have been nominated as international advisors of the newly established Shanghai Forum. We also engage directly with various international museums and government bodies regarding heritage legislation, preservation, presentation and promotion (e.g. to discourage the trade of illicit antiquities, strengthen heritage registration and protection systems, and enhance the socio-economic benefits of archaeology) – in, for example, Borneo, Bosnia-Herzegovina, Cape Verde, Egypt, Germany, Greece, Kenya, Libya, Malta, Sudan, Uganda, the United States and Vietnam.</p> <p>3) Communities experiencing rapid change: In many of our fieldwork regions communities are now living through rapid and substantial change in their natural and cultural environments, and in their economic milieu. Repeatedly, the natural and cultural resources that are being lost are being charted by our research, and this research has the potential to benefit significantly the future economic lives of these communities. We have been putting in place structures to connect with such user communities, ranging from private organisations, such as Unilever Bioscience, to public bodies, such as the Sarawak Centre for Biodiversity, to individual communities such as the Kelabit farmers and Penan foragers of Sarawak.</p> <p>Our principal impacts fall into three categories broadly corresponding to the above groups: <i>heritage interpretation and curriculum development; heritage management; environmental management and future food</i>. Our research falls into six main themes that connect with the above-mentioned user groups in the following ways: Human Behaviour and Evolution (1); Human Palaeoecology (1, 2, 3); Human Landscapes (1, 2, 3); Material Culture and the Body (1, 2); Urban Society and the State (1, 2); and Heritage in the Contemporary World (1, 2, 3).</p> <p>b. Approach to impact</p> <p>Cambridge archaeologists have worked both individually, and within a series of institutional instruments (both archaeology-focused and university-wide) to influence the aforementioned communities and users. Through a flexible mentoring approach, we encourage all researchers to make contact with their likely user communities from an early stage in each project and to maximise the potential of Cambridge's impact instruments. The three principal archaeology-focused examples are our museums, our professional initiatives (principally the CAU), and our</p>

outreach instruments, including Access Cambridge Archaeology. The principal university-wide instruments include the Cambridge Centre for Science and Policy (CSaP), the External Affairs Public Engagement Team, and the Streaming Media Service. Here we provide selected examples of the successful use of each.

We have engaged Cambridge University's nine museums with our research, and the communication of archaeological knowledge forms a sustained and central part of the agenda of three: the MAA, the Fitzwilliam Museum and the Museum of Classical Archaeology. The University invests significant recurrent funds in the activities of each, and aims to draw upon recent and current research in the formulation of its exhibitions and outreach.

From 4 April–1 June 2013, the MAA mounted the *Cultured Rainforest* exhibition directly drawn from the research of Barker *et al.* conducted in the Kelabit highlands of Borneo from 2007–2010. The exhibition aimed to overturn the idea that rainforests are the last virgin landscapes of the world and show that these supposed natural wildernesses have in fact been shaped by humans for 50,000 years. The 45 days of opening attracted 6899 visitors to this event, which also was filmed and featured on ITV news. The exhibition is now being prepared for a 2014 opening at Sarawak Museum, Kuching.

The *PITOTI* exhibition provides another clear example of the connectivity between primary research and a series of dissemination instruments both internal and external to the University. Research entered within our 2008 RAE submission (cf. Chippindale & Nash 2004 *The Figured Landscapes of Rock Art*) provided a platform for the first author and another McDonald Institute Fellow, Dr Frederick Baker, to develop the *PITOTI* exhibition. Launched at the 2012 *Milano Triennale*, where it attracted over 20,000 visitors in a month, it was also shown at the MAA, where it ran from 6–23 March 2013 and attracted a further 1830 visitors. The Cambridge Office of External Affairs embedded the exhibition within the *Cambridge Science Festival*, and arranged a linked *Science Festival* lecture on the 12 March 2013, entitled “*Ten Thousand Years Etched in Rock*”, and an online video made available through the Streaming Media Service entitled “*The Dawn of Cinema*”, with 10,061 views to date. This in turn led to a series of media outputs, including a feature article in the *Guardian*. Yet another major research project, *Creativity and Craft Production in Middle and Late Bronze Age Europe (CinBA)*, resulted in a MAA exhibition from 10 April–13 June 2012 that was attended by 10,211 visitors and formed an integral part of the Museum's activities for the Art Fund prize for Museum of the Year (for which it was shortlisted).

Egyptology research is well established at Cambridge and has been continuously supported by the McDonald Institute since its inception. Within this UoA, its current Category A staff list includes Nyord, Papazian, Ray and Spence, and its 2008 RAE return included Barry Kemp (awarded a CBE in 2011 for services to archaeology, education and international relations). This team has made a significant on-going contribution to Egyptological research, for example in relation to Tell el-Amarna, which has contributed strongly to the impact agenda of the Fitzwilliam Museum. Between 2009–2011, Dr Sally-Ann Ashton directed the *African-centred Egyptology in Prisons* project, drawing on Cambridge's archaeological findings and the Museum's collections in over 300 sessions involving over 3000 prisoners and over 300 prison staff. The project has been mentioned favourably by prisoners and assessors in the following Her Majesty's Prison (HMP) Inspectorate Reports: Edmunds Hill 2009; HMP Manchester 2009; HMP The Mount 2009. Ashton has also been asked to deliver cultural-awareness training for staff at prisons and in prison education departments as a direct result of the project. She also sat on the Equality and Inclusion committee at HMP Peterborough from 2009–2011 and her study of prisoner expectations regarding Black History Month at HMP Edmonds Hill (now HMP Highpoint North) informed the activities for this event in 2009 and subsequent years.

CAU is in its third decade as a professional unit embedded within the Department. Alongside the conduct of rescue excavations, the Unit is committed to enhancing the use and quality of research interpretation within the context of the wider development industry, and has worked closely with key developers to enhance and implement that. One example is the *Unearthing the Past* project, developed in conjunction with its industrial partner, Hanson Aggregates (one of the world's leading producers of construction aggregates). This initiative has provided an interactive web-site (www.unearthingthepast.net), with accompanying poster displays and a series of touring 'schools boxes' containing archaeological finds and replica artefacts. Equally, in 2011, funded by a Higher Education Innovation Funding (HEIF) knowledge-exchange grant, and conducted in partnership with Hanson Aggregates and the Royal Society for the Protection of Birds (RSPB), the

CAU undertook *Digging Environment*. This involved having members of the public – with specialist tuition over a period of two weeks – excavate the ancient lakebeds of Willingham Mere, there revealing fallen forest trees and animal skeletons dating from as early as the Late Bronze Age. The Unit's cooperation with the RSPB is long-standing, ranging from the provision of archaeological training to research on archaeological assemblages of bird bones for use in support of the Society's campaign to re-introduce the White-tailed Eagle. The CAU also regularly hosts major public outreach programmes on a number of its main excavations, which variously encompass volunteer-public excavation weeks, open-days (attracting upwards of 500 visitors each), schools visit-weeks and web-site/social-media presentations. To further promote the professionalism of archaeology nationally, the McDonald Institute sponsors an annual Field Archaeologist in Residence award, providing an opportunity for explicit collaboration between academic and commercial practitioners (see the Research Environment template for awardees).

The McDonald Institute's ACA unit and HEFA have, since 2005, enhanced educational, economic and social well-being through active participation in archaeology. ACA aims to develop new skills and confidence, raise educational aspirations and encourage the enjoyment of learning for its own sake. The success of the experience is monitored and assessed. For example, 2010 feedback showed that young people who have attended ACA programmes are 20–60% more likely to want to go to university after completing these than beforehand. Within the 2011 feedback, 93% of approximately 500 teenagers from across East Anglia assessed their ACA experience as excellent or good. Nearly all of these young people, most from families with little experience of university, said they finished the course feeling more positive about themselves and about the idea of going to university. ACA is also developing and promoting robust assessment methods for vocational skills in collaboration with Cambridge Assessment, the University's international exams group.

Moving from archaeology-focused to university-wide instruments, the University of Cambridge Streaming Media Service performs an important role in reaching a global on-line audience through video, audio and other means. It has been instrumental in communicating, for example, the *PITOTI* exhibition (see above), and the *Personal Histories Project*. The latter, student-run, project is funded by the McDonald Institute and invites prominent senior researchers and other influential figures in the field (see the Research Environment template) to explore the stories behind their professional careers. Through the media service, a series of student-produced free films have been disseminated to over 100 countries around the world. Since April 2010, there have been 19,376 downloads – 18,453 from beyond Cambridge, and 12,636 from beyond the United Kingdom. Prior to implementation of this service we put YouTube to similarly good effect. Uploads by the EU-funded *Cultural Heritage and the Reconstruction of Identities after Conflict* (CRIC) project have been viewed over 23,000 times.

A second University-wide instrument, CSaP, was established by the University in 2009 to promote engagement between its network members: policy professionals, experts in the sciences and engineering, business leaders, early-career researchers and others who have an interest in the relationship between science and policy. One example of its support for archaeology researchers is Petrie's *Land, Water, and Settlement Project*, which explores the possible link between environmental change and the rise and fall of the earliest civilizations in South Asia, between 2000 and 300 BC, when the courses of a number of major rivers are believed to have shifted. This project marks the first integrated investigation of the environmental and cultural processes that accompanied these shifts and their impact on cultural development, and brings together the best of Indian and British expertise in the relevant human and environmental sciences. Understanding how and why past Indian societies responded to environmental threats and changes has critical resonance with current questions of human response to climatic and environmental change. In this context, CSaP has been advising Dr Petrie on his discussions with policy-makers in India.

A third University-based instrument, the Public Engagement Team within the Office for External Affairs and Communications has organised the *Cambridge Science Festival* since 1995, and the *Cambridge Festival of Ideas* since 2008. The McDonald Institute and the above-mentioned museums have played a very central role in both since their inception, with substantial footfall on each occasion (note, for example, the *PITOTI* exhibition above). The McDonald Institute has become embedded in these programmes to an extent that the Secretary to the Institute Director now advises the Public Engagement Team on implementation strategy. In addition, the Office for External Affairs and Communications, through a variety of instruments, is actively expanding the

reach of our research findings which has led to the research being brought to the attention of new communities of policy-makers.

c. Strategy and plans

Looking to the future, the McDonald Institute has established two further instruments: an Impact Facilitation Panel, and an Impact Facilitation Fund. The University has also added to its range of central instruments. Alongside the CSaP and Public Engagement Team, mentioned above, it has in 2013 set up a Cambridge Impact Fund for generating impact from social science research, in the context of its selection by ESRC as one of three pilot centres for the acceleration of research impact. At an intermediate level, the School of the Humanities and Social Sciences (within which Archaeology resides) has secured investment from the Philomathia Foundation to facilitate social science research that engages directly with public policy – by placing outstanding post-doctoral researchers in Faculties and Departments relevant to specific policy challenges. This range of instruments, at local, School and University level, will each contribute in a flexible way to our future strategy and plans.

In terms of the local instruments, the Impact Facilitation Panel serves the whole UoA17a group, and is serviced by the McDonald Institute, which will contribute, on a recurrent basis, a proportion of administrative and IT personnel support to enable meetings to be run and business to be executed. The Panel advises the UoA on opportunities for impact, and develops and creates action plans and monitoring pathways. The Panel is chaired by the Deputy Director of the Institute, and composed in even numbers of researchers and users. The current user members include senior figures from education, museums, public policy, and ecological futures.

The Impact Facilitation Fund comprises a core commitment of £10,000 per annum, to which additional external funds can be added, to which academic staff (University Teaching Officers, curators, post-doctoral research fellows, etc.) can apply for funds in support of activities to help them promote the potential relevance of their findings – cultural, social, and/or economic – to non-academic users.

d. Relationship to case studies

The *Historical Nature of the Human Body* and HEFA case studies between them provide examples of the first category of impact: *heritage interpretation and curriculum development*. The former illustrates how our investment in world-class museums facilitates highly effective follow-through from complex primary research publications not just to highly accessible exhibitions, but also to altered perceptions of what the human body means. Other examples of our practice include the *PITOTI* and *Cultured Rainforest* exhibitions (see above). HEFA, established in 2005, and the *Personal Histories Project*, established in 2006, provide examples of how we have used, and will continue to use, the McDonald Institute as a platform not just for primary research, but also for speculative outreach and access projects.

The *Archaeology and World Heritage Status on the Cape Verde Islands* case study provides an example of the second category of impact: *heritage management*. It demonstrates the potential of marrying core academic research with the heritage-management skills of our Cambridge Archaeological Unit within a global frame. Its success depended upon bringing together academic institutions from different countries, governmental agencies, intergovernmental agencies and non-governmental organisations (e.g. *Ministerio da Cultura*, UNESCO, ICOMOS) to work constructively together. Parallel collaborations characterise other Cambridge initiatives underpinning on-going bids for World Heritage Sites (e.g. *Tràng An* (Vietnam), *Niah Caves* (Sarawak) and *Hunter Gatherer Geometric Rock Art Sites* (Uganda)).

The *Trajectories of Aridification* and *The Past and Future Roles of Asian Millets* case studies provide examples of the third category of impact: *environmental management and future food*. In both cases, the dissemination of archaeological-science research may be traced through to decision-making for conservation of a critical global ecological resource, understood through knowledge of past human interaction. As with heritage management, this invaluable outcome arises from active constructive communication with governmental, intergovernmental and non-governmental organisations, but in this case in the food and environment sectors. In these examples we have made a conscientious decision to make a wider non-academic audience aware of the research, which also led to such strong and continued engagement with NGOs and governments. These case studies also illustrate cross-disciplinary communication (Royal Botanic Gardens and the National Institute of Agricultural Botany) as well as the food industry (Unilever).