What’s the Damage?
*Physical encounters: increased benefit or increased risk?*

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UCL Institute of Archaeology, 31-34 Gordon Square, London, WC1H 0PY

### CONFERENCE ABSTRACTS
*Abstracts are in order of programme*

#### The Challenge of Conservation’s ‘Catch 22’
Elizabeth Pye, UCL Institute of Archaeology

‘Conservation’s “Catch 22” presents a challenge to all of us who are professionally responsible for heritage monuments or collections:

*Access to heritage objects brings social benefit*
*Greater access brings greater social benefit*
*Greater access brings greater damage*
*Greater damage brings reduced social benefit*

Of course, uncontrolled physical contact with objects can, and does, cause damage and we fear accusations of irresponsibility if we allow this to happen, but what forms of damage are caused in the name of preventing damage? Do we blight developing or potential interest amongst people who would gain from physical contact? Do we risk loss of interest, even loss of funding, if museums and monuments seem to have nothing to offer? Do we risk disaffection of groups who might otherwise become involved in promoting and protecting our heritage? This paper explores the challenge of achieving a balance between the competing needs of people, and of the monuments and collections cared for in their name.

*Elizabeth Pye is a Senior Lecturer at UCL Institute of Archaeology where she coordinates the MA in Principles of Conservation. She leads the conservation team for the international archaeological project at Çatalhöyük, Turkey, has particular interests in heritage and conservation in Africa, and in issues of access to museum collections. She is author of Caring for the Past: Issues in Conservation for Archaeology and Museums, London: James and James (2001), and editor of The Power of Touch: Handling Objects in Museum and Heritage Contexts, Walnut Creek: Left Coast Press (2007).*

#### It’s all Greek to me! Reflections on some issues relating to classical marbles
Susan Pearce, University of Leicester

Recent fieldwork on the Dodecanese island of Kos, and related work on the late eighteen/early nineteenth century collectors Charles Tatham and C.R. Cockerell, has highlighted a range of problems relating to what happens to material after it has been discovered. This paper will consider the issues involved.

This paper has two strands: first, the fascination with objects, and this is because they are infinitely re-interpretatable depending on what is wanted at the time; and second, the very clear desire of people to see/touch the ‘real thing’.
Susan Pearce is Emeritus Professor of Museum Studies at the University of Leicester, a previous Pro-Vice Chancellor of the University, past President of the Museums Association and past Vice-President of the Society of Antiquaries of London. She specialises in the study of material culture and of post-Roman Britain, and is the author of many books and papers.

Creating the right atmosphere: for people and for collections
Ben Cowell, The National Trust

The National Trust has been looking after special places and collections since 1895, with the intention of caring for these places ‘forever, for everyone’. It could be argued that there is an internal contradiction here – between the wish to conserve for the longer term (forever) and the ambition that this should be ‘for everyone’ (whether in the here and now or in the future) – given that the latter may imply unsustainable levels of physical wear and tear. But both sides are absolutely critical to our purpose: ‘forever’ is meaningless if it is not also ‘for everyone’. This presentation will explore this creative tension, by considering some examples of how National Trust properties and collections are being made accessible to a wider range of people without also compromising their physical integrity and significance.

Ben Cowell is Assistant Director, External Affairs at the National Trust, a role he took up at the end of 2008. Prior to this he held various posts at DCMS, including as Head of Museums, and at English Heritage (as Head of Social and Economic Research), where he was responsible for producing the annual Heritage Counts report.

A right versus a right: balancing two sections of the museum code of ethics: a question of trust?
Julie Shelley and Stuart Kennedy, Reading Museum

How do we go about creating the balance at the Museum of Reading? We minimise risk to the objects by applying best practice in packaging and collections care. The Heritage Lottery Fund (HLF) supported ‘Outside the Box’ project has enabled us to do this. We also have constant consultation with our curatorial team to check objects and re-assess their suitability to be handled.

Experience over the last four years of the project, and since the loans service was started in 1911, has shown that part of the social benefit comes from entrusting the public with the objects and empowering them by trusting all ages to treat the objects with respect.

The ‘Museum of Reading Reminiscence’ memory boxes are a good example of the advantages of touching and handling collections. The value in handling real museum objects is so high that for us it worth the risk, as long as we have minimised that risk as much as we can. In our community work we have seen how the commonality of objects is as powerful as the extraordinary object.

Stuart Kennedy has a background in history, having completed an undergraduate degree at the University of Aberdeen and an MPhil at the University of Glasgow. After a period of time volunteering at the Scottish Mining Museum he began the University of Leicester Museum Studies MA, graduating in 2008. He currently works as a loans researcher on Reading Museum Service’s ‘Outside the Box’ project.

At present Julia Shelley works at the Museum of Reading on the ‘Outside the Box’ project, designed to deliver the varied collections of the museum to schools, care homes and community groups using MOR designed loan boxes. Her background is in history and history of art (UCL) and she holds a postgraduate diploma in Art Gallery and Museum studies at the University of Manchester. Before coming to Reading in 2004, she had worked as both a curator and education officer at the Geffrye Museum, National Gallery and Gunnersbury Park Museum.
Feeling our way: towards a shared approach to object handling in the public galleries
Paul Sullivan, *Bristol Museums*

The paper begins by looking at why museum and gallery staff need to agree an approach to handling objects in public areas. It then considers the damage we do when we deny visitors the opportunity to handle objects on display. Finally, it presents a process for agreeing an approach to handling objects, and looks at where we are in Bristol’s Museums, Galleries and Archives.

Paul Sullivan has been blind since birth. He is a part-time Communities Engagement Officer with Bristol's Museums Galleries and Archives, working primarily on the Museum of Bristol project. Before joining the Museum, Paul was an Access Officer at the University of Bristol, where he ran accessibility courses and delivered disability-related training for a range of clients, including museums, galleries and other heritage organisations.

A close-up look: ‘Meet the Antiquities’ in the Fitzwilliam Museum
Helen Strudwick and Julie Dawson, *Fitzwilliam Museum*

‘Meet the Antiquities’, is an informal gallery programme at the Fitzwilliam Museum. It offers individual visitors a close look at objects from the display and reserve collections, assisted by specialists (curators and conservators) and trained volunteers. Often the objects used are currently under study or treatment. The aim of the programme is to expand the visitor’s understanding of the original function and cultural context of the piece, how it was made and how it has been affected by its later history. These encounters make the work of the Museum visible and accessible in a very personal way and give the visitor the opportunity to respond directly. Detailed visual examination, discussion and the handling of associated materials are all encouraged, but the visitor is not permitted to touch the object. This talk will describe how the sessions are set-up and run and the choice of objects. It will consider visitor feedback and discuss participants’ ability to interact with the objects without direct physical contact.

Julie Dawson trained as an archaeological conservator and has worked in Scandinavia, the Far East and Egypt. She is Senior assistant Keeper (Conservation) at the Fitzwilliam Museum, University of Cambridge. Her particular areas of interest are the technology and conservation of ancient Egyptian material.

Helen Strudwick is an Egyptologist in the Department of Antiquities at the Fitzwilliam Museum. Since 1985, she has also been archaeological director of the Cambridge mission working to document private tombs at Luxor. Her main interest is in communicating about ancient Egypt to members of the public and colleagues alike. Her publications include *The Tombs of Amenhotep, Khummose and Amenmose at Thebes* and *Thebes in Egypt*, as well as numerous academic papers.

Panel Discussion: How powerful are the benefits of access?
Chairied by Chiara Ambrosio, Teaching Fellow and Research Assistant in Philosophy of Science, *UCL Science and Technology Studies*

Chiara Ambrosio studied Semiotics as an undergraduate at the department of Scienze della Comunicazione (Università degli Studi di Salerno). In 2007 she was awarded a PhD in Science and Technology Studies from UCL. Her thesis, 'Iconicity and Network Thinking in Picasso's Guernica: A Study of Creativity across the Boundaries' was an interdisciplinary effort to explore the influence of science and technology on Pablo Picasso’s 1937 masterpiece, Guernica. Chiara Ambrosio’s research interests include the relations between art and science in the twentieth century, American Pragmatism, and the contemporary debate on the nature of representations in Philosophy of Science.
The conservation object: linking past condition to present lives
Dean Sully, UCL Institute of Archaeology

The separation of cultural objects from their present is a device of heritage conservation. This separation essentialises objects as a representation of an expected past state. This requires arbitrary choices to be made about an object's care in order to distinguish what condition states are acceptable and what states require intervention. By reconnecting objects with the present, we can evaluate the value of change in object condition in relation to the impact that objects can have on people's lives.

Dean Sully practiced as a conservator from 1985-2000 at Chepstow Museum, the British Museum, the Museum of London and the National Heritage Board of Singapore. Since 2000 he has been a Lecturer in Conservation at UCL and a Conservation Advisor for the National Trust. His current research focuses on the impact that the conservation process has on people's lives and involves an adaptation of understanding conservation practice in relation to the goals of community groups. Since 2001 this research has focused on the care of Hinemihi, the Maori meeting house at Clandon Park.

Damage and How to Manage it
Amber Xavier-Rowe

At English Heritage we are responsible for the care of approximately 472,481 objects housed in 123 properties, stores and purpose built museums. Having recently completed a comprehensive condition and risk audit which aimed to identify which risk factors are causing damage we are in the position to make a judgement on where to direct limited resources to greatest effect.

This is however a rather simplified statement and assumes we are in control of our own destiny. Many factors both planned and unplanned influence the rate of damage to collections and historic sites and public access plays a key role. Objective information arising from the collections audit is provoking change at EH. However economic pressure to cut overheads, increase revenue, maintain and conserve an estate of over 400 sites as well as meet wider government agendas, has resulted in unexpected impacts both positive and negative on the risk to our properties and collections.

Results from the national collections and risk audit, a 100% condition audit of paintings and gilded furniture at Apsley House and the sudden influx of higher then expected visitor numbers at Down House and Dover Great Tower will suggest that public access is essential to long term care of collections. How to manage public access in a sustainable way in a reality that involves economic pressures and senior management agendas will also be discussed.

Amber Xavier-Rowe is Head of Collections Conservation at English Heritage. She has developed her interest in the conservation and management of collections in heritage properties since joining English Heritage in 1995. Prior to that she worked at the Leather Conservation Centre and Artlab Australia. She is an accredited member of the Institute of Conservation (ICON).

Measuring damage using state-of-the art analysis techniques
David McPhail and Richard Chater, Imperial College

In this talk we will look at the sensitivity and resolution of some state-of-the-art analytical techniques that can be used to study surface morphology and surface chemistry.

We will show how optical interferometry can be used to measure very subtle changes in surface morphology, due for example to fine scratches or dirt particles. The instrument we will describe, the Zygo white light interferometer, is air based and can accommodate large samples. The Zygo generates digital maps of the surface, thus the data is quantitative. It is possible, therefore,
to quantify the roughness of the surface and thus to see how it changes with time. In principal at least the Zygo can be taken to a fixed object such as a statue and the same area assessed periodically.

Secondary ion mass spectrometry (SIMS) is an example of a technique used to measure surface chemistry. Originally developed for the semiconductor industry it is a technique that enjoys very high sensitivity so that trace levels of contamination (parts per billion in favourable cases) can be detected. SIMS is very good at measuring light elements such as hydrogen, carbon and oxygen, as well as alkali metals and halides, for example. Thus SIMS is very well suited to the study of contamination and atmospheric degradation due to entities such as water vapour, COx and NOx and can measure contamination long before it can be detected by the human eye. SIMS provides spatial information on the distribution of elements and has a precision of less than one nanometre in depth (depth profiling mode) and 50nm laterally (in the imaging mode). We will give some examples showing how we can use SIMS to measure contaminants. Also we will show how we can use SIMS to measure ultra-slow changes in surfaces with time, for example vessel glass corrosion and build up of dirt with time on a laser cleaned surface.

We will finish by describing the new TOF SIMS – LEIS (Time of Flight Secondary Ion mass Spectrometry - Low Energy Ion Scattering) system to be installed in our lab in March 2010 and we will invite collaborations.

Richard Chater and David McPhail run the Surface Analysis Lab in the Materials Department at Imperial College. This is one of three departmental facilities, the others being Electron Microscopy and X-Ray. The equipment includes an optical interferometer, an AFM, and three SIMS machines including a Focused Ion Beam SIMS instrument. They have run many projects in collaboration with local museums. Projects have included studies into: vessel glass corrosion processes (V&A and RCA); laser cleaning (V&A, RCA, Tate and City and Guilds Art School); bidri (V&A); and armour (the Royal Armory and the V&A museum). They are keen to develop new collaborations.

Do we know what we are missing? Exploring the real value and potential of virtual touch in museum display
Angela Geary, Northumbria University

Highly precise 3D data capture capabilities, visualisation techniques and advanced virtual interactive technologies offer us the possibility of replicating our experience of museum artefacts. Haptic (touch interactive) interfaces can allow us to touch the untouchable – precious and fragile objects from paintings to fossils can be simulated haptically in form, mass and surface. Visual simulation can be highly authentic to an original artefact – but there is nothing quite like touching something to really convince us and add impact to our encounter – whether real or simulated.

Despite advances in technology and computing power, haptics remains an unresolved field of computer interaction. Haptic devices are typically encumbering, restrictive or awkward physical devices. This is, in part, simply due to the practical difficulties in engaging our bodies and limbs in haptic interaction in naturalistic and perceptually comfortable ways. Multi-utility haptic systems do a reasonable job of simulating many ‘grasp and poke’ types of interactions with one or two hands, however, it is difficult to imagine that a ‘universal’ haptic system can be developed in the scope of conventional engineering and interaction science as we know it.

In the context of museum collections, the physical complexity of the artefacts and materials involved brings considerable challenges. Beyond weight and dimensions, including 3D capture in this, we do not gather specific haptic data in the process of documenting museum artefacts. Information such as average forces involved in shearing, tearing and compressing materials; surface friction against moving touch; elastic or plastic modulus and so on, are valuable in this context. As artefacts become aged, damaged or lost, knowledge of these intrinsic qualities
preserved alongside colour and form would facilitate highly authentic simulation or facsimile production.

The materiality of experiencing cultural heritage is undeniable and a poor analogue may be worse than none at all – given the rich capability of our own imaginations. Defining a future role and framework for applying multi-sensory and haptic interaction in the museum context may be more about what it can add, rather than replace, in our encounters with artefacts. Low-tech., as well as high-tech., solutions to enhancing our understanding of the material experience of artefacts require exploration as we consider what exactly we are missing when we may look at, but not touch, an artefact.

*Angela Geary is an artist, art conservator and researcher. She is Reader in Fine Art Conservation at Northumbria University. Her research interests include art practice, art conservation and the innovative application of science and technology in these fields. Her current projects include computer aided manufacture techniques in fine art practice, the structural simulation and visualisation of cultural heritage artefacts, haptic skills in conservation practice and the development of low cost ultra high-resolution digitisation systems for fine art and cultural heritage applications. Her research includes projects funded by the AHRC and the Technology Strategy Board, and collaborations with Imperial College, University College London Tate and the Henry Moore Foundation.*

**Panel Discussion: How serious are the risks of damage?**

Chaired by Helen Wilkinson, Museums Association

*Helen Wilkinson has worked on policy and projects at the Museums Association since 2002. She is the author of the major 2005 report, Collections for the Future, which has helped set the agenda for a range of new approaches to collections and collecting. She also works as a consultant specialising in research and policy development. Helen began her museum career working as a researcher and curator, first at the National Media Museum, then at the Victoria and Albert Museum.*

**Handling the Future**

Jonathan Ashley-Smith, Royal College of Art

Touching museum objects has obvious experiential, educational and therapeutic benefits; however there are equally obvious risks. In the past these risks have been considered so great that total physical separation of objects and visitors has become the norm.

Factors affecting the balance of risk and benefit are: the value and vulnerability of the object; the skill and experience of the person doing the handling; the degree of supervision; the needs of the visitor and the mission of the holding institution.

Using decision-support tools such as flowcharts it is possible to develop a systematic approach that assesses the risk of losing future opportunities for access while ensuring an acceptable convergence of the needs of the visitor and the limitations of the object.

*Jonathan Ashley-Smith is an independent teacher, researcher and consultant in the area of collections risk. He is Visiting Professor in the Conservation Department at the Royal College of Art, London. He is author of Risk Assessment for Object Conservation, Oxford: Butterworth-Heinemann (1999). Formerly he was Head of Conservation at the Victoria & Albert Museum.*