An Anthropology of Conservation

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Abstract

An Anthropology of Conservation has been devised to determine the different approaches to conservation developed by cultural groups throughout time. The research questions that this thesis addresses are as follows :

- Are there common threads associated with approaches to the care of material culture and its conservation?
- What type of artefacts do different cultures retain and preserve?
- Why do cultures conserve and how do they achieve this?
- Does conservation actually exist outside of the remit of 'modern' (Western) conservation?

Accessibility to literature and artefacts helped to narrow the field of study and the following social groups were selected for in depth analysis representing a range of temporal and spatial variables : Ancient Egyptian; British Regimental Culture; Native American: Roman; Aboriginal and Maori; and Modern British Culture.

In order to collect the large volume of information required for this endeavour, a data-gathering tool, in for form of a structured questionnaire, was developed and refined. The tool allows for the critical analysis of conserved artefacts through the viewing of either objects, conservation reports, images of conserved artefacts, treatment-based articles or a combination of the above data.

An early hypothesis to emerge focuses on how value is perceived in artefacts and how value influences conservation effort and he point in an object's life when conservative effort is likely to be attempted.

This thesis aims to reveal the conservation systems practised by the selected cultural groups and to critically address the research questions. It is intended that the synthesis will broaden theoretical understanding of approaches to conservation.

Contents Page

List of Figures

Declaration:
No part of this work has been submitted as part of a degree by myself at this or any other University.

The only portion of this research that has been published is a version of the value chapter, which was submitted as a paper (Hucklesby: 2005; 1022-1027) for the 14th Triennial ICOM-CC Conference in The Hague and printed in the conference pre-prints.

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Introduction

This thesis is a study of different approaches to conservation developed by cultural groups throughout time. The aim of the study is to reveal global conservation practices and to develop a clearer understanding of the nature of conservation. The research questions that this thesis will address are as follows:

- Are there common threads associated with approaches to the care of material culture and its conservation?
- What type of artefacts do different cultures retain and preserve?
- Why do cultures conserve and how do they achieve this?
- Does conservation actually exist outside of the remit of 'modern' (Western) conservation?

'Conservation' is a concept that is used to describe a wide variety of activities, from protection of environmental resources to the preservation of historic sites, buildings and artefacts. The notion of conservation can also be extended to the preservation of intangible, but very real constructs, such as cultural identity. The treatment of artefacts is the main remit of this research and in order to clarify the use of some of the terminology employed in this work, I have supplied a number of definitions below:

- The generic definition of **conservation**, regarding material culture, is : the protection of material possessions from unwanted changes, such as decay or damage. Conservation can also refer to the administering of repair, should an object suffer decay or damage.

- The generic definition of conservation is often used in association with reference to '**conservation behaviour**'. In the context of this study, the definition of '**conservative / conservation or preserving behaviour**' is : an active demonstration of (generic) conservation, usually through the undertaking of repair.

- '**Native repair**' is defined as : object repair undertaken by a member of the object-producing cultural group, i.e. object and repairer belong to the same cultural group.

- '**Curation**' is defined as : the diurnal care and maintenance of material culture.

- '**Conservation**' (especially from a Western perspective) is defined as : the act of preserving valued objects (i.e. cultural property) from loss of value via decay or damage. It is also the act of applying sanctioned treatment to damaged or decayed cultural property, following technical investigation, to prevent further deterioration, and possibly to repair or restore the appearance of the item.

The concept for 'An Anthropology of Conservation' developed out of the recognition in the last decades of the 20th Century, that indigenous groups did not always regard Western conservation practices to be appropriate for the treatment of their material culture. Proponents of indigenous rights instigated the development of movements that recognised these rights.

By the close of the 1980s, progress was being made in the quest to include the views and interests of native peoples in archaeological interpretation and the care of cultural heritage (Pye : 2001). In 1989, at Vermillion, the World Archaeological Congress Inter-Congress backed the Vermillion Accord, which discussed the ways in which human remains should be respected. In the following year, WAC embraced the 'First Code of Ethics', which addressed the obligations pertaining to indigenous peoples in relation to human remains and cultural remains (WAC : 1991). The Native American Graves Protection and Reparation Act 1990 was also passed in the same year, and comprised a framework for the repatriation of grave-goods (including human remains) from museums back to appropriate groups. In Australia, the Burra Charter (devised in 1979 and most recently revised in 1999) as set out by Australia ICOMOS (International Council on Monuments and Sites) sought to recognise sites and material culture of cultural significance (Australia ICOMOS : 1999). The Charter helped to

secure protection for many national monuments and, significantly, Aboriginal sacred sites.

The recognition that Western conservation could not be administered as a universal panacea to the world's material preservation issues provided scope for the exploration of alternative approaches to conservation. According to the American Institute of Conservation, (AIC : 1994, 1) :

"The primary goal of conservation professionals, individuals with training and special expertise, is the preservation of cultural property. Cultural property … is material which has significance that may be artistic, historic, scientific, religious or social … an invaluable and irreplaceable legacy that must be preserved for future generations."

This recent definition of the role of conservation acknowledges the notion of 'significance' with regard to cultural property – a reflection of a more inclusive understanding of worldwide cultural heritage. However, it cannot be inferred from this definition that the act of conservation is consistent with views of appropriate treatment as expressed by native producers of material culture. With the knowledge that opinions on the treatment of material culture vary amongst contemporary social groups, it is possible to extrapolate that past groups expressed their unique views through their treatment of artefacts. These are the processes that this thesis seeks to reveal.

Anthropological ethnographies might seem an ideal source for the discussion of material culture treatment, since cultural anthropology is the branch of anthropology that deals with the holistic study of how culture influences individual experience, through the observation of customs and institutions (Wood : 2001). Further, Lowrie (1934, 384-285) encouragingly declared, "The general goal of anthropological study is to understand the whole of culture in all periods and ages, and to see each humblest fragment in relation to that totality". However, much ethnographic writing stops short of describing artefact repair or preservation, focusing instead on manufacture, and on functional and symbolic usages. It is not always possible to discover if the absence of this information results from a lack of preserving behaviour or a research design that does not emphasise such treatment of objects. What this situation helped to establish

is that this thesis required a broad-spectrum research approach in order to tease out seemingly reluctant information.

Hodder (1991 : 2) contends that, "the relationship between material culture and the people who produce it is a complex one", which is why it was necessary for me to approach the exploration of the nature of conservation in three different ways, as I describe below, since no single approach would yield sufficient data.

The first research approach was the development and testing of the 'value hypothesis', where the hypothesis contested that the value of an artefact changes through the course of its life and that conservation only occurs when the perceived value of the artefact is high. Evidence is sought for the shape of the curve, and for this a means of measuring value was required. Financial value was selected, as it was one of the few fully quantifiable means available. Artefacts with a long and recorded history of financial value – here vintage cars and postage stamps – were used to test the hypothesis. The evidence can be found in Chapter 2.

The second approach entailed the research of specific cultural groups, by means of extant literature, personal communication and artefact study. The aim here was to discover the various methods of conservation and material culture treatment employed by different social groups. The findings would be measured against modern conservation practice as espoused by Conservation Laboratory Culture – the representation of 'modern' Western conservation. The results of this study can be found in Chapters 3 – 8.

The third approach required the development of a robust data-gathering tool that took the shape of a structured questionnaire. The aim was to establish if there were any universal rules that applied to conservation behaviour, and to reveal the existence of different conservation practices. The development of the structured questionnaire and survey can be found in Chapter 1. The results of the survey are in Chapters 3 –8 as above.

In order to answer my research questions, it was necessary for me to source literature to develop and support my arguments. Having established that ethnographic monographs would not supply sufficient information, I turned to contemporary conservation publications; museum literature; museum catalogues; and anthropological, economic and history-related literature. The conservation works assisted in the development of a clear picture of modern Western conservation systems, against which the remaining cultural groups could be compared. Museum literature was relevant to notions of conservation, since much 'modern' conservation is practised in a museum or related context. Conservation Laboratory Culture (Chapter 3), as the benchmark group became known, is well documented, but the remaining groups are rarely written about from the point of view of their preserving behaviour, necessitating a more lateral approach.

Museum literature proved to be an excellent source of information for two branches of research – the value hypothesis and the cultural groups, since it yielded data about changing artefact values and the perception of object value, and information about native curation and preservation.

The value hypothesis was supported by conservation, museum and economic literature, through the discussion of changing artefact value and the measurement of cultural value.

The data for the structured questionnaire survey was derived from a number of different sources – conservation publications (in particular 'Studies in Conservation'); appraisal of conserved objects in museum exhibitions and stores; museum catalogues (although this proved to be a weak source); and laboratory conservation records.

To create a strong basis for the discussion of the Conservation Laboratory Culture, I needed to explore the development of the group, which meant referring to conservation histories. Both Caple (2000) and Pye (2001) supply strong and complimentary histories of the development of the discipline. Pye provides a rigorous examination of 'conservation behaviour' in ancient civilisations and how these early examples are reflected in the development of conservation practice over time, until it

evolves into the profession that it is recognised as in contemporary society. Caple also constructs a thorough history of conservation, but with a closer focus on the development of conservation as a profession, supplementing the discussion with a history of the development of conservation organisations, reflecting the discipline's metamorphosis into a profession.

Muñoz-Viñas (2005) makes it clear that the arrival of conservation as a discipline does not make the end of its evolution. He brings conservation into the 21st Century by acknowledging that recent advances in science and contemporary thinking has necessitated the reappraisal of classical theories and ethics to make then compatible with current knowledge. Muñoz-Viñas addresses what is conserved and reasons for conserving, along with the translation of new theories into practice.

In the search for examples of traditional conservation systems amongst the cultural groups, Kreps (2003) supplies some invaluable examples. She discusses the role of indigenous curation and preservation in the context of indigenous museum models. Western museums are recognised to be centres for cultural preservation, but indigenous equivalents have existed since ancient times, and have been overlooked as places of preservation, because the systems of collecting and curation do not resemble Western practices (Kreps, 2003 : 46). For instance, shrines and temples housing and displaying artefacts for ritual use, not only act in the same capacity as museums, but have healers and priests acting in the role of curator to oversee the care of the objects. This deliberate and careful preservation of valued artefacts supports an argument for the existence of alternative systems of conservation.

Keene (2005) explores how the artefacts within museum collections can be utilised to create cultural value – a synthesis of objects of value that have been preserved. She investigates the multiple ways in which museum collections can be employed to engage the public, through education, depictions of cultural identity, and challenging perceptions of the past. Keene argues that collections, on one hand, are invaluable as a tool for creating awareness of people's historical roots, thus reinforcing cultural identity. Objects with the most cultural relevance to a group have the greatest resonance with the audiences.

Keene (2005 : 160) discusses how the value of museum objects is stored as cultural capital or potential value that can be realised as cultural value by granting people access to appreciate the collections. Cultural value can actually increase within collections as more people are able to receive benefit from access. Keene adds further support to the notion of native conservation behaviour by discussing the existence of non-Western museum equivalents and the concomitant preservation of material culture by indigenous groups.

Marstine (2006) discusses the changing value of artefacts within the context of the museum environment. She explores how objects can change in meaning and value when placed in museums; and that value can be controlled and altered by their 'reframing' on the museum stage. If it is possible to alter value perception in this way, it would suggest that the material culture possesses multiple value attributions, which can vary in their relative importance. As modern Western museums are places of conservation, it can be postulated that the objects that enter museums have sufficiently high value to merit conservation effort. If this is so, then it could be demonstrated that an artefact's value does not remain constant once it has been conserved, and that the object's value has the potential to stay high, increase or even fall.

Many authors have provided their insight into the values that can be attached to objects, including Ashley-Smith (1999), Carman (2005), Keene (2005), Muñoz-Viñas (2005) and Thompson (1979). Cultural value and its divisions receive much attention, since this is the value form perceived to be most closely allied with cultural property.

Further discussions of object value can be found in Chapter 2. In the development of my structured questionnaire I divided object value into the following categories –

- Functional
- Cultural
- Commemorative
- Aesthetic

The aetiology behind this decision was to find a small selection of broad, umbrella values to describe the types of objects that cultures conserve. The categories needed to be reasonably discrete, so that a clear allocation choice could be made when answering the questionnaire. These values represent the primary values assigned to objects at manufacture. There are numerous other ways to perceive these values as demonstrated by the authors above, but allowing free expression of this in a questionnaire would not lend itself to statistical analysis. Instead, I chose these categories with the intention that other nuances of value could be subsumed within them. The definitions for these value types can be found in the Methodology, Chapter 1.

In a similar way, I devised a set of values that could be used to describe why objects are conserved :

- Functional
- Cultural
- Personal
- Capital
- Aesthetic
- Educational

As before, there are many further ways in which value could be described, but for the sake of analysis should be allied with one of the options proposed above. (Definitions of these values can be found in the Methodology, Chapter 1, and further discussion of value in Chapter 2.)

Thompson (1979) provides an early thesis for the observation and mechanisms of changing artefact value in his 'Rubbish Theory'. Thompson asserts that most artefacts begin life in his 'transient' category, which sits above the 'rubbish' category (and possible oblivion) and the 'durable' category (and expected longevity and preservation). The hypothesis asserts that as objects age, they tend to lose value (financial and cultural), for a number of physical and social reasons, and head towards the 'rubbish' category, where they are deemed valueless. Objects then take one of

two paths – continued languishment as 'rubbish' and eventual destruction, or elevation into the 'durable' category, where value is once more perceived to be high. Thompson states that objects do not take the following paths :

- Rubbish ? transient
- Transient ? durable; or
- Durable ? rubbish.

A number of other authors have built on this work and have looked at other formats for assessing and measuring artefact value (especially cultural value). These include Muñoz-Viñas and Throsby, the latter studying the link between cultural value and economics. Object value is considered further in Chapter 2.

CHAPTER 1
Methodology

A clear data collection methodology was required in order to answer the research questions set out in the Introduction –

- Are there common threads associated with approaches to material culture treatment and attitudes towards conservation that link different cultural groups?
- What type of artefacts do cultures retain, conserve or repair?
- Why do cultures conserve and how do they achieve this?
- Does conservation actually exist outside of the remit of 'modern' (Western) conservation?

This research project has sought to develop a series of methods for the collection of the wide range of conservation data from different cultural groups and artefacts, required for inter-cultural comparisons. Where there is reference made to 'conservation' in this chapter, it is applied as a descriptive term to explain artefact care and repair in the broadest sense. 'Conservation' is being referred to, therefore, in the generic sense, as defined in the Introduction, as the existence of conservative behaviour.

A three-pronged approach was employed for the generation of data, but in this chapter the focus so on the development of the structured questionnaire, since this provided a large dataset for analysis and interpretation.

The first research approach was the development and testing of the 'value hypothesis', where the hypothesis contested that the value of an artefact changes through the course of its life and that conservation only occurs when the perceived value of the artefact is high. Evidence was sought for the shape of the curve and for this, a means of measuring was required. Financial value was selected, since it was one of the few fully quantifiable means available. Artefacts with a long and recorded history of

value – here vintage cars and postage stamps – were used to test the hypothesis. The evidence can be found in Chapter 2.

The second approach entailed the research of specific cultural groups, by means of extant literature, personal communication and material culture employed by different social groups. The intention was for this information to support that gathered by the structured questionnaire. The results from the cultural groups and questionnaire can be found in Chapters 3 – 8.

Selecting the Collection Tool

In deciding to search for universal rules (common threads) of conservation between spatially and temporally distant cultural groups, I was committed to gathering a large volume of data from disparate sources. For this reason I determined that a case study approach to attempt to illustrate my aims would not provide sufficient information as a stand alone device. (However, by the nature of the exercise, my cultural group chapters do resemble very broad case studies.) I also dismissed the use of personal interviews for gathering this data, because some of the cultural groups represent historic societies and I needed a tool that could be applied uniformly to all selected groups. The large volume of data required, accompanied by the need to consult artefacts without the benefit of their creators, drew me to the use of surveys, which meant that I would be able to statistically analyse the information collected.

In order to work successfully for the collection of the considerable volume of data needed, which would be gleaned from written and published conservation records and conserved artefacts, the collection tool needed to be robust. This in turn necessitated the consultation of survey design literature, to establish which configuration of questionnaires would best suit the needs of the research. There were two broad categories available – paper-based or electronic, both of which have advantages and disadvantages. Computer-based questionnaires have several potential advantages and within CAPI (computer-assisted personal interviewing) (Brace, 2004 : 27) there exist software packages such as Opinio, that are specifically designed to facilitate the data-gathering process. Through these packages, professional-looking forms can be

devised with relative ease, and pre-coded questions can be programmed into the form, enabling the program to analyse the responses. This saves the researcher a considerable amount of time in processing data. However, this technique only works with the use of closed questions, "for which the respondent is provided pre-selected answers to choose from" (Fink, 2003 : 159). Early drafts of my questionnaire made it apparent that some sections of free text or 'open' response would be required in order to provide contextual descriptions of the identity of the object under observation (crucial to the identity of the object). This would preclude the successful use of such software. In addition to this, there were the software costs and training required to gain familiarity with the software and devise the programming. Of course, beyond the initial set-up phase the automatic analysis of data would have provided a time saving.

In favour of using a paper-based survey method was the option to include both open and closed questions, which I already established was an important factor. The paper alternative was cheap and relatively quick to set up, which meant that I would be able to trial it and then commence the collection proper. A disadvantage of a paper-based form is the potential for it to look less sleek than a computer generated equivalent. There was also the consideration of the creation of a computer database to receive the information and the risk of incorrect data entry leading to skewed results.

On balance, the paper form proved to be the more suitable option for me, because I did not have access to the software or a laptop computer, and so still would have had to transfer written notes to the system. Most importantly, I felt that I could not dispense with the open-ended data. What is more, I could easily carry a few copies of the form around with me, in case I happened to chance upon some appropriate data in an unexpected context.

Having opted for a paper form, I needed to select with care the questions that I would pose and how they could be answered, i.e. whether or not they would be 'closed' questions with coded responses, or 'open' questions. Closed questions can be used to present questions with a limited selection of specified answers to choose from. Provided the categories used are exhaustive, a respondent should be able to pick an appropriate response without having to resort to a 'do not know' category (Buckingham & Saunders, 2007 : 142). The advantage of closed questions is that one

of a range of predicted answers must be selected, producing less variable responses than open questions, and producing answers that are much easier to statistically analyse (Fink, 2003 : 17-18). It therefore seemed wise to incorporate closed questions to the extent that this was possible, and reserve open questions for instances when written information was required, such as for the description of the conservation object under scrutiny. However, as I have said above, the use of open questions was unavoidable in some instances, given the individual nature of the information sought.

The questions for the structured questionnaire were selected with the aim of generating precise, accurate and reproducible results that would help to answer the research questions. According to the Questionnaire Design Manual (SCPR, 1972 : 2) it is not uncommon for questions to be employed that do not prove to be useful in later analysis, or for potentially useful sections to be omitted. For this reason, much thought was given to question selection, with the intention that less would be required by way of later revision. To facilitate the design process, a detailed list of queries and objectives was drawn up for the questionnaire to answer, thus helping to ensure that important questions were not overlooked. Once particular areas of enquiry began to come to the fore, specific questions were formulated and an order selected, allowing for a first draft of the questionnaire and accompanying instruction booklet to be written. The instructions were crucial to the successful completion of the form, since they laid out the answer codes and provided definitions to prompt the selection of the most appropriate answer.

For further details of the construction of the form see Appendix 1.

The instruction booklet and questionnaire can be seen below in **Figure 1:1**:

Figure 1:1 Structured questionnaire and Instruction booklet

An Anthropology of Conservation:

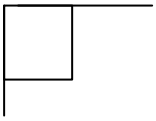
INSTRUCTIONS FOR FILLING IN THE STRUCTURED QUESTIONNAIRE:

INTRODUCTION:

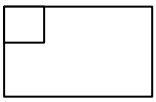
The sample form on p.2 has been designed to gather information about the motivations for preservation and the conservation techniques that have been employed by different cultural groups throughout time.

The numbers beside the boxes refer to a list of instructions, the details of which are given below (pp.3-8).

After examining the group of artefacts and any associated material, please fill the **small square boxes** using the options provided in each section. Only use designated letters/numbers. If there seems to be no exact match select the closest alternative.



The **larger rectangular boxes** provide an opportunity to add descriptions or details. E.g. the large box in 3a) can be filled with details such as the name, date and origin of the artefact(s) in question.



SPECIAL NOTES:

Where boxes are bracketed (i.e. 2b) and 3a)) these can be filled if it is felt that a secondary category is in strong evidence.

Up to 5 materials can be selected for 3b) and these should be ordered proportionally, so that the material with the greatest volume appears first.

For section 5) a number should be entered into each box.

Brief descriptions for each of the available terms are given below (pp.3-8). The terms are printed in **bold type**. Please take time to read through these before filling any of the boxes.

If you are uncertain about the option that you have selected or the details you have written, you can place a "?" after the letter/number or phrase in question.

Questionnaire for recording the conservation details and circumstances

Record number

Source material Object | Written **record** | Published **record** | Picture

1a) Conserving culture

Number

1b) Culture conserved

Number

2a) Party responsible for the object

Letter

2b) Why the object has been preserved

3a) The type of object preserved

3b) The materials that the object comprises

3c) The deterioration that is evident **pre-conservation** | **Post-conservation** | **Either pre or post cons.**

4) Who conserved the object

Letters

5) The balance of techniques used to preserve the object

I **R** **C** **A** **P**

6) The occupation of the party filling out this form

Conservator | **Curator/Archaeologist** | **Other**

7)

Other notes

SECTION DESCRIPTIONS AND TERMS:

Record number: A unique record number has been assigned to each of the objects in this experiment. Write the designated number, given in the information with the object, in the "Record number" box.

Source material: Assess the type of source material that you are working from and place a tick in the box(es) to the right of the relevant description(s).

1a) Conserving culture: Select a number from the list on p.9 that most closely corresponds with the group responsible for conserving the object and place it in the small box. BE AS SPECIFIC AS POSSIBLE.

In the large box supply details, where known, of the name, location and approximate date of the group. NB: this information is especially important if a generic cultural grouping has been selected.

1b) Culture conserved: Select a number from the list on p.9 that most closely corresponds with the social group from which the object to be conserved has been derived and write it in the small box.

In the large box supply details, where known, of the name, location and approximate date of the group. NB: this information is especially important if a generic cultural grouping has been selected.

2a) Who holds responsibility for the object?:

For this box select the initial letter of the phrase (in bold type) that most accurately describes the responsible party and place it in the small box.

In the large box supply details, where known, of the name and location of the responsible party.

O = Owner: A party that has exclusive rights pertaining to the use and treatment of an object. All decisions regarding the fate of the object can be made by this party. *E.g. private owner, be they individual, family, company or institution.*

C = Custodian/curator: A party that is usually appointed to manage the use and treatment of an object. Many decisions regarding the fate of the object can be made by this party. However, major decisions must sometimes be referred to a second party (usually the owner) for approval. *E.g. museum curator or housekeeper.*

U = Usurper: A party that acts as though they have the exclusive rights of ownership pertaining to the use and treatment of the object. However, for legal or technical reasons these rights are illusory and the party has no real authority to instigate treatment. *E.g. thief or non-legal owner (unknowingly buying stolen goods).*

2b) Why has an object been preserved?:

For this box select the initial letter of the word (in bold type) that most closely fits the reason and write it in the box. The second, bracketed box can be filled if there seems to be a strong secondary reason.

F = Functional: An object has been retained because it exhibits a desirable utilitarian capacity. *E.g. furniture, tools or buildings.*

C = Cultural: An object has been retained because it possesses a symbolic function that eclipses utilitarian value. Cultural objects possess a contextual significance and can hail from any definable section within a society, be it religious, political or economic. *E.g. Bishop's crosier, the Budget case or a flag.*

P = Personal: An object has been retained because it possesses associations with the experiential past of a given individual. The value is often symbolic, since the object is past evoking, and not necessarily discernible to other parties. *E.g. a childhood toy, gift of low monetary value or trinket.*

£ = Capital: An object has been retained primarily as an investment, because it possesses an economic or exchange value. *E.g. cut gemstones or mint coins.*

A = Aesthetic: An object has been retained because it has a value derived from bringing pleasure to the senses. *E.g. painting or sculpture.*

E = Educational: An object has been retained because it possesses a potential for study, discussion or instruction, whether the quality be apparently inherent or culturally imposed. *E.g. natural history specimens or archaeological objects.*

3a) What type of object has been preserved?:

For this box select the letter next to the term that most closely fits the object's description and write it in the box. The second, bracketed box can be filled if there seems to be a strong secondary function.

In the large box write the details, where known, of the object's name and approximate date.

F = Functional: An object that primarily serves a utilitarian purpose – a useable artefact. *E.g. furniture, tools or buildings.*

C = Cultural: An object that possesses symbolic value related to those denoted in the "cultural" section of the previous category set. *E.g. Bishop's crosier, the Budget case or a flag.*

R = Commemorative: An object that has been designed to evoke a past event or person and is imbued, therefore, with contextual significance. *E.g. pilgrim badges, commemorative stamps, plates or coins.*

A = Aesthetic: An object with the primary function of pleasing the senses that has not been specifically designed to belong within the group of cultural objects or commemorative objects. *E.g. painting or sculpture.*

3b) What materials does the object comprise?:

Select up to 5 materials from the list (bold type) below, placing the material with the greatest volume first, ending with the material of smallest volume.:

Ag –	Silver	**St –**	Stone
Au –	Gold	**Ip –**	Ink, Pigment, Dye
Cu –	Copper alloy	**Lq –**	Lacquer
Fe –	Iron	**Pa -**	Paper
Pb –	Lead	**Tx –**	Textile
Sn –	Tin, Pewter	**Ba –**	Basketry, Grasses, Leaves
Mm -	Modern metals (Al, Pt, Zn etc)	**Bo –**	Bone, Ivory, Shell, Antler Horn
Ce –	Ceramic		
Gl –	Glass	**Fr –**	Fur, Hair, Feathers
Ve –	Vitreous material, Enamel	**Lh –**	Leather, Hide
Pp –	Plastic, Polymer	**Wo -**	Wood

3c) What deterioration is evident?:

After observing the object try to describe the deterioration evident by selecting the letters for the term (in bold) that most closely describes the condition. If it is possible to determine if the deterioration occurred either pre- or post-conservation, place the letters in the appropriate box (1st or 2nd box). If the deterioration sequence cannot be determined, place the chosen letters in the last box.

ND = No deterioration: There is no visible deterioration apparent.

SD = Superficial damage: There might be surface damage and/or minor structural damage, such as limited cracking, small losses or minor weaknesses and minor biological attack or chemical changes.

MD = Moderate deterioration: Visibly obvious surface and/or structural damage, such as relatively extensive cracking, losses, weaknesses and biological attack or chemical changes.

ED = Extensive deterioration: Extensive surface and structural damage, such as major cracking, losses, weaknesses and biological attack or chemical changes.

DD = Deliberate "damage": Damage that has been instigated deliberately, be it as an act of veneration towards the object or as an act of vandalism.

4) Who conserved the object?

This section describes the party undertaking conservation work. For the small box select the letters next to the term that most closely describes the worker.

In the large box supply details, where known, of the name of the worker(s) and the approximate date of the work.

SB = Skilled "believer": The worker has received some formal training in preservation/conservation and subscribes to the cultural mores of the society by whom the object is held. This is reflected in the techniques employed. *E.g. conservator.*

UB = Unskilled "believer": The worker has received no formal training in preservation/conservation, but subscribes to the cultural mores of the society by whom the object is held. This is reflected in the techniques employed. *E.g. native public.*

SNB = Skilled "non-believer": The worker has received some formal training in preservation/conservation, but does not subscribe to the cultural mores of the society by whom the object is held, although they may acknowledge the social systems. Acceptance or denial of cultural mores may be reflected in the techniques employed. *E.g. craftsman.*

UNB = Unskilled "non-believer": The worker has received no formal training in preservation/conservation, but does not subscribe to the cultural mores of the society by whom the object is held, although they may acknowledge the social systems. Acceptance or denial of cultural mores may be reflected in the techniques employed. *E.g. general public.*

5) What balance of techniques has been used to preserve the objects?:

This section is based on evidence that can be seen or extrapolated from the object/records.

In the box next to each letter supply the number that most closely describes the level of conservation work administered.

I **0 = No investigation or analysis undertaken.** No evidence of action taken of an interventive or analytical nature.

1 = Simple investigation and/or analysis undertaken. There is evidence that the object might have been analysed visually and have undergone simple wet chemical and/or mechanical tests to establish material identification/condition. *E.g. early conservation practice.*

2 = Extensive and detailed investigation and/or analysis undertaken. There is evidence that the object might have been analysed with more powerful forms of visual analyses, such as SEM/X-rays. Material analysis might have been attempted with techniques such as FTIR/EDXRF. Tests for treatment suitability will almost certainly have been. *E.g. modern conservation practice.*

R **0 = No recording undertaken.** No evidence of records of any description.

1 = Rudimentary records made. There is evidence that notes might have been made describing the work carried out, mentioning materials used, but not necessarily the quantities, concentrations or duration of treatment. There might be a simple sketch to accompany the notes. *E.g. early conservation practice.*

2 = Extensive and detailed records made. There is evidence of detailed records kept that describe and quantify the treatment methods employed, along with descriptions pertaining to the condition and composition of the object. The details are often accompanied by an annotated diagram and/or photographs and, where appropriate, X-ray plates. *E.g. modern conservation practice.*

C **0 = No cleaning undertaken.** There is no evidence that cleaning of any description has been undertaken.

1 = Some cleaning undertaken. There is evidence that partial or selective cleaning, by chemical or mechanical means, of corrosion products and accretions has been undertaken. *E.g. treatment of archaeological ironwork.*

2 = Extensive cleaning undertaken. There is evidence that the object has been fully cleaned or almost fully cleaned of dirt, corrosion products and accretions, by chemical or mechanical means. *E.g. washed textiles.*

A **0 = No interventive treatment administered.** There is no evidence that interventive treatment of any description has been undertaken.

1 = Repaired to stabilise the condition of the object. There is evidence that minimal intervention has been employed to stabilise the object and minimise further deterioration. This might involve chemical or mechanical means. *E.g. the reassembly of broken ceramics.*

2 = Restored to working order or to emulate original appearance. There is evidence that chemical or mechanical treatment has been undertaken to enable the object to be restored to working order and/or original appearance. This might entail the inclusion of new materials. *E.g. a fully restored ceramic vessel.*

3 = Altered beyond original form or function. There is evidence that the object has been changed in such a way that it no longer resembles its original form and/or function. This will probably have entailed the introduction of new materials to the object. *E.g. the addition of unauthentic-looking limbs to broken statues or objects re-used in a non-original manner.*

P **0 = No preserving action undertaken.** There is no evidence that action specifically designed to cause the object to be preserved has been undertaken.

1 = Object stabilised through removal of environmental/physical threats. There is evidence that the physical/ambient environment of the object has been altered, either pre or post conservation, to achieve the cessation of deterioration. *E.g. objects boxed and housed in library/museum.*

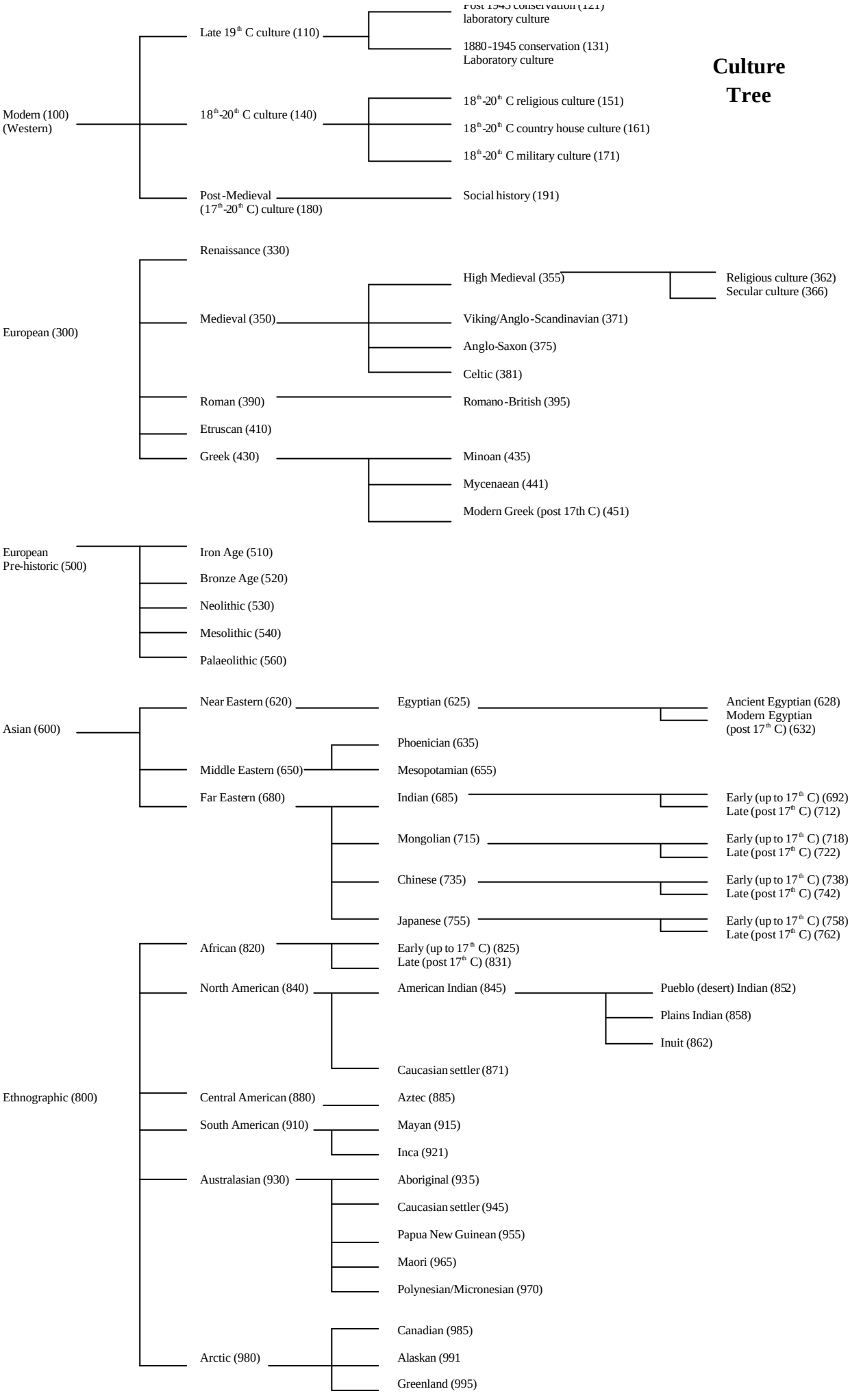
2 = Specialised storage system designed for object. There is evidence that a container or chamber has been provided as part of a physically/environmentally controlled environment, either pre or post conservation. *E.g. a box/chamber is fashioned especially for the object and placed in library/museum.*

6) What is the occupation of the person filling out the form?

There is a choice of three occupational groups. Select the one regarded to be most appropriate and place a tick in the box next to the chosen category.

7) Other notes: This box provides the form-filler with an opportunity to add additional comments/information that are thought to be relevant, but do not belong in any of the other boxes. This box can be left blank.

Culture Tree



The Box of Artefacts

With a version of the questionnaire in place the next stage was to test it with volunteers, to establish if the form, instructions and definitions were workable. For this piloting stage a selection of conserved artefacts, representing a range of cultures, materials and states of deterioration were sought, that could be kept together as a collection for the duration of this study. The Archaeology Department at Durham University possesses an artefact teaching collection, and from this I was able to assemble a set of ten artefacts, against which to test the form. According to Hodder (1994: 393) material "evidence endures physically and thus can be separated across space and time from its … producer, or user. Material traces thus often have to be interpreted without the benefit of indigenous commentary." This was certainly the case with most of the objects in the set, since all of them had received some degree of conservation treatment, but there were only two official conservation records between the ten objects and very little supplementary information. As I alluded to before, it is very difficult to make objective interpretations of objects if they are divorced from their contexts. It was for this reason that I sought additional information to accompany the artefacts that were more difficult to interpret as stand-alone objects (see Appendix 2). The artefacts were as follows: an embroidery (with its conservation record); a set of nails from Inchtuthil, displayed in a wooden box (background detail added); a copper alloy figurine of Isis and Horus (background information and conservation added); copper alloy pins; a stoneware vessel; an iron horseshoe (with background information added); a copper alloy Wadjet figurine (with background information and conservation record added); a leather bag (with conservation record); an iron shoe last (with background information added) and a ceramic tile. The two copper ally figurines had been conserved in the recent past, but their conservations were missing. Since the treatment of archaeological copper alloys has been fairly standardised in modern conservation practice I took the decision to make a mock up of a conservation, to accompany each one, with the probable treatment they received. The reason for providing the supplementary data was so that the questionnaire could be tested against the kind of material I intended to work from – i.e. with some contextual information. The original conservation records were hand-written, and so I produced the information in a word-processed document, presented alongside a copy of the

original record. This was done in order to make it easier for testers to assimilate the information, since this was a test of information interpretation, and not graphology.

Figures 1:2 and 1:3 are photographs of the artefacts used for the piloting of the structured questionnaire.

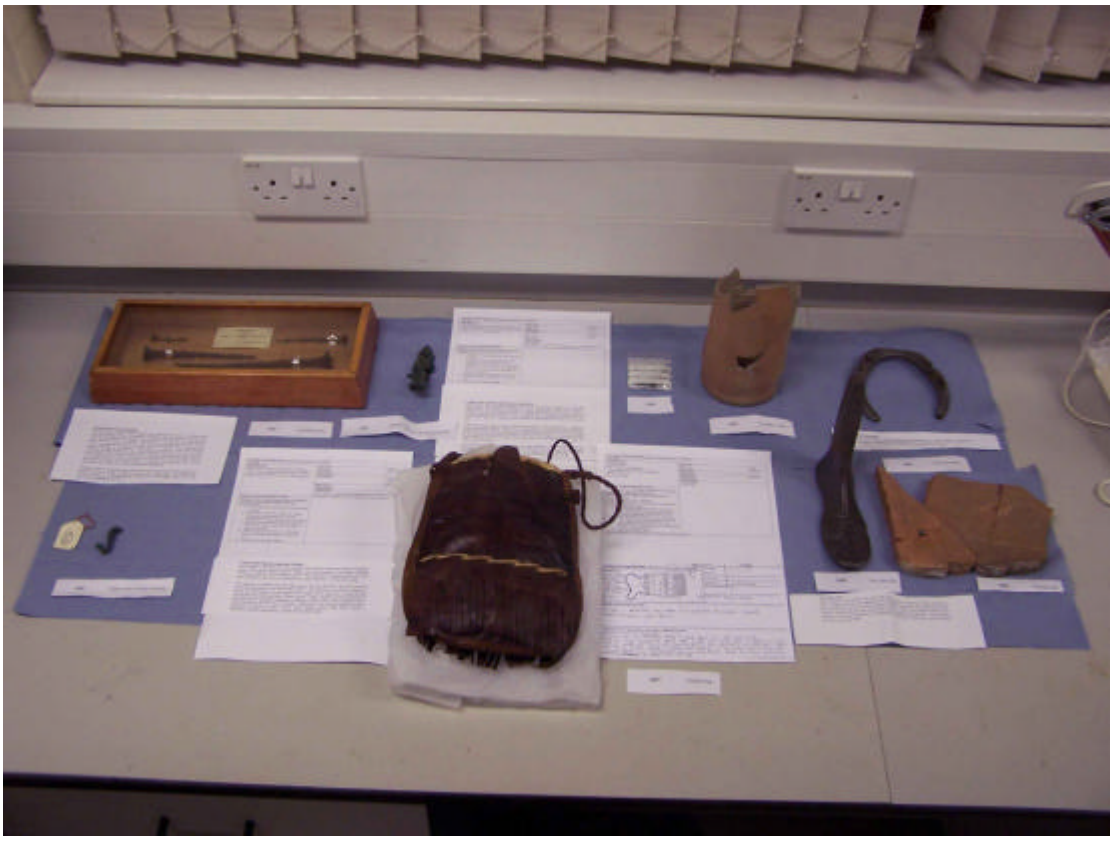


Figure 1:2 Artefacts for the testing of the questionnaire

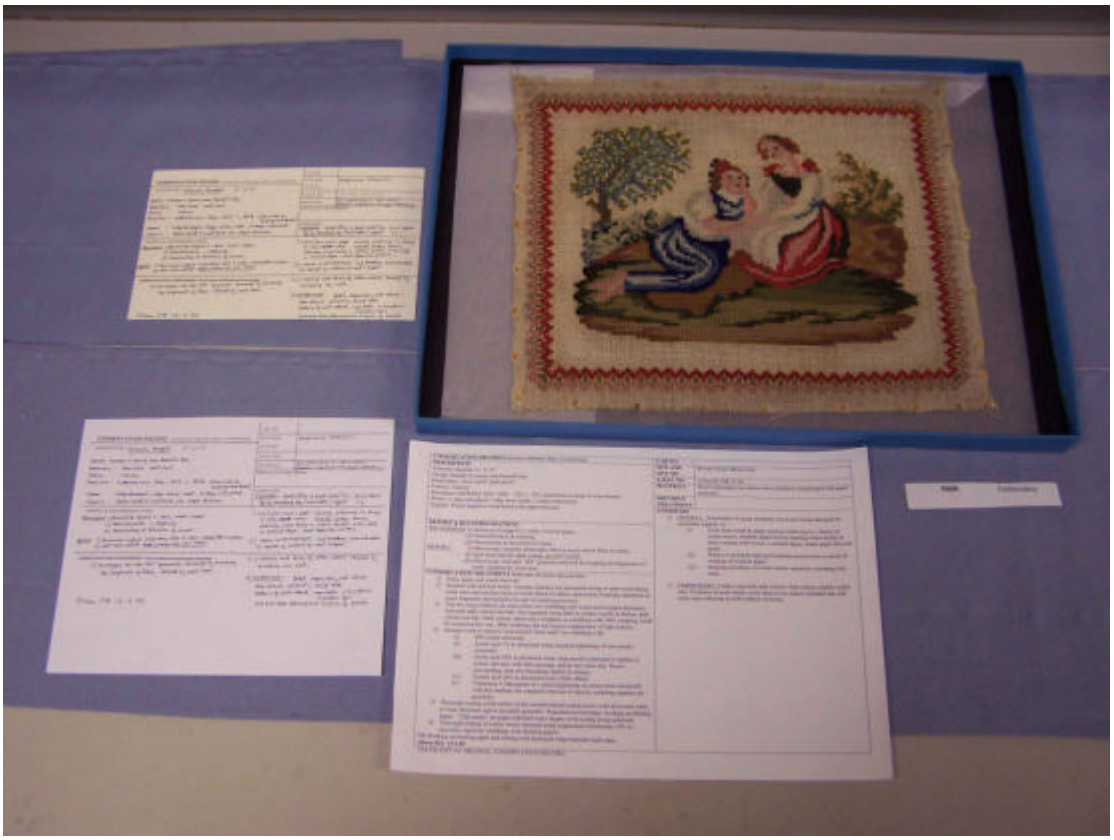


Figure 1:3 Embroidery in the box of artefacts for testing the questionnaire

Pilot testing

Seven volunteers filled out questionnaires for the ten artefacts set aside for testing the form. Seven volunteers is quite a small number, but it generated seventy forms, which was sufficient to gauge an impression of the variation in responses. What is more, the testing required a certain amount of time commitment, because there was quite a lot of information to digest from the instruction booklet before the questionnaires could be filled out. Of course, when a user is familiar with the terms and options the questionnaires take much less time to complete, because there is less cross-referencing with the instructions.

The results were closely allied for culture selection of the cultural groups undertaking conservation and providing the material culture for conservation. The options chosen often coincided, and where there was variation a similar, but less specific group tended to be selected. Confidence in the answer comes with supporting contextual information and the more detailed and accurate this is, the

more specific the answers can be. There was general agreement about the materials present and the order in which they were to be placed, but some testers included more categories than others, suggesting an extra degree of thoroughness. The results for the deterioration were also quite closely matched, but some testers placed their answer in the "pre or post conservation category", suggesting that they lacked confidence to assign it to one of the other two specific answers. There was more variation in the answers for the reasons why objects were conserved and the object type. Some of the artefacts did not come with supplementary information, and so judgements had to be made on the basis of the artefacts themselves. This again highlights the importance of contextual detail. Another detail to note is that where secondary values were assigned, some testers selected the same two options, but inverted them, suggesting that the presence of both values was apparent, but that the selection of the primary value is decided by the tester's own cultural preconceptions. The results for the balance of conservation techniques showed greater similarity in response for the artefacts that were accompanied by conservation records, which supplied a lot of contextual information. The artefacts without additional information produced more variable results. This outcome highlighted the significance of contextual information and suggested that, wherever possible, artefacts should not be consulted in isolation. The overall impression given by the piloting of the questionnaire was that the tool was sufficiently robust to continue using in its present format, but that conserved artefacts should be consulted in conjunction with extra contextual information, in order to ensure the most accurate results.

Selection of cultural groups

Having established that the structured questionnaire was robust enough, it was time to proceed to the data-gathering stage. When starting this project it became apparent that an extensive study of global and temporal cultural groups would not be possible within the time available. This inevitably meant that a range of specific groups were required for the focus of the study. The chosen groups needed to represent a range of spatial and temporal loci and a variety of cultural traditions. These requirements, on their own, did not help to narrow the selection, which meant that further, practical considerations had to be taken into account. For example, it was important to seek cultures that were known to

possess relatively large material culture assemblages and that collections of the artefacts were available in UK museums, since the majority of the research would be undertaken in Britain. Furthermore, in order to support the artefactual data, a large volume of native, ethnographic or archaeological literature, was desired to place evidence of object care in context. Cultures that fitted this remit were Aborigine and Maori Cultures (researched simultaneously to maximise the data collection output); Native American Culture; Egyptian Culture; Roman Culture and British Regimental Culture. Conservation Laboratory Culture was automatically selected to act as a point of reference. The results of the individual group studies can be seen in Chapters 3 - 8.

Collecting the data

With the cultural parameters in place it was necessary to begin the collection of data. My sampling strategy was to gather information about conservation practice from a wide range of cultures, with special focus on the cultures singled out for study. The aim was to consult conservation literature and publications, conserved artefacts in museum collections (both displayed and stored) and written conservation records. In order to find UK museums with collections pertaining to the cultures under study I consulted the Museums Yearbook and the Internet. The University Library in Durham and the Department of Archaeology housed a range of conservation literature, thus providing a starting point for the survey study. After a short period of data gathering, problems with the balance of the data began to arise. Although there was a good supply of published conservation information, sometimes references to the conservation of artefacts did not supply sufficient information for the completion of forms. A further problem was that literature tended to be published by proponents of modern conservation practice, with very few examples from other cultural groups. The reason for this discrepancy has its association with conservation practice and record keeping, since it is only Conservation Laboratory Culture that keeps records as a matter of course.

It was hoped that analysing museum artefacts could redress the balance, but this presented problems of its own. It was often the case that display artefacts did not show signs of native conservation and any work undertaken was modern. This

absence of physical proof could be related to a lack of native conservation, but in some respects it is more probable that it is a reflection of the process of artefact collection. Damaged or repaired artefacts may not have been selected for collection, since in the eighteenth and nineteenth centuries aesthetics influenced such decisions. Museum displays were to be attractive and informative in equal measure. Another practice that compounded the imbalance, especially in the nineteenth and early twentieth century, was the commissioning of artefacts, by ethnographers, from indigenous groups. In this way pristine objects would arrive at museums. It was hoped that analysing stored artefacts might reveal examples of native repair, but the results of this were poor. Again this would seem to point to the lack of selection of such objects in programmes of collection, or lack of native repair. The difficulties experienced in the data gathering, led to a strong bias of modern conservation examples, even though other cultural examples were actively sought. It is for this reason that the independent study of the specific cultural groups was of vital importance in creating a framework for material culture care.

A further bias in the data was the large volume of conserved archaeological material in the Conservation Laboratory Culture group. The reason for this was the use of written laboratory records from the Department of Archaeology. These records were consulted when no further results were yielded from the published literature. However, since Conservation Laboratory Culture is being used as a benchmark for conservation practice, the data for this group does need to be thorough and extensive. (See Appendix 3.)

Analysing the data

The emergence of a data set necessitated the development of a coherent, computer-based recording system that would permit the analysis of the material. The need for such a tool was recognised from the outset. I settled upon Excel as the most appropriate software package for the display and manipulation of the data, since it not only benefits from the visual display of a spreadsheet, but can be interrogated as a database (see Appendix 4). At an early stage of the data gathering, a table was set up in a spreadsheet, to receive the information collected. In order to check that the format of the spreadsheet was suitable for

the manipulation of data, a number of trial graphs were produced. Once it was established that the format was workable, the remaining information from the questionnaire forms was entered into the spreadsheet and checked for errors, such as invalid codes, created through typographical error. Fortunately the number of errors was small and these could be remedied by reference to the original questionnaire forms. Due to the nature of the questionnaire, the data within the spreadsheet contained both numeric and text forms (though not mixed fields). This presented problems in the generation of graphs, since the information format did not lend itself to graphic representation. Advice was sought (Phil Clogg, *pers. comm.*) about how the obstructions might be overcome and it transpired that the employment of Excel's pivot table function allowed for the transformation of the information into chart form, with relatively minor manipulation of the original data.

Sorting the data

In order to develop the structured questionnaire I compiled a fairly comprehensive list of questions to represent the enquiries that would be made of the data. Once the survey data was entered into the computer I then attempted to find a graphic solution to the various questions. Analysing the spreadsheet data I discovered that some categories, such as the party responsible for object, and the party conserving the object, yielded such uniform responses throughout, that they were of limited use as points of comparison between cultural groups. I then extracted subsets of data to create tables that could be sorted in order via the query function. When the data had been sorted, it was possible to calculate frequencies of occurrence, which were placed in a further table, from which a graph could be produced.

Producing the graphs

A number of different graphic options were explored for the representation of the data. Bar charts were eventually chosen, because it was felt that the data trends were most clearly represented in this way.

The value of the data

There are both strengths and weaknesses in the execution of this survey. The design of the form, for example, has allowed for a wide range of information to be gathered from a number of different sources. The coded responses for the questionnaire has ameliorated interpretation of the data, by making the recognition of patterns and trends easier, through the visual recognition of responses given to questions. One of the weaknesses of the survey is the bias of Conservation Laboratory Culture and the preponderance of archaeological objects in the set (see Appendix 5). Yet such bias would have been difficult to avoid and there is the advantage that a large data set for the modern conservation group is useful, because this is the culture used as a point of comparison for the conservation methods of other cultures. Although it would be an advantage to have had larger data contributions from the remaining cultural groups, to check their statistical validity, there is evidence from the individual studies of these cultures that reinforces the results described in the following chapter. The questionnaire itself has merit as a data collection tool and over a longer period of time a more comprehensive picture of traditional conservation methods could be established using this technique. As the existing dataset stands it has been able to produce some insightful information and is of particular value when looked at in conjunction with the cultural studies.

CHAPTER 2
Value and Conservation

Artefact value is closely associated with conservation, and this chapter explores the link between relative value and conservation effort. Before the discussion reaches this point, however, it is important to establish the different categories of value that can be perceived by society, how these values change through time, and how these values can be measured.

Many authors including Fielden (1993), Leigh (1994) and Michalski (1994) have published suggestions on categories of values pertaining to artefacts, but this did not produce a consensus that could lead to codification, since there was too wide a variety of terms and some values were apparently sub-categories of larger categories. Ashley-Smith (1999) sought to crystallise distinctions between possible value categories by determining a group of values that could not be subsumed with any alternative categories. The results of his research can be seen in the table below :

Value category	Descriptors
Economic	Use; exchange; monetary
Informational	Documentary; scientific; perceptual
CULTURAL	*Aesthetic*; *authenticity*; *historical*; political; social; spiritual; symbolic
Emotional	*Aesthetic*; personal narrative
Existence	Existential

Figure 2.1 : Table from Ashley-Smith (1999 : 84) with supplementary cultural value descriptors from Throsby (2001) and Keene (2005)

The criteria that Ashley-Smith (1999 : 84) applied to the categorisation were that the categories of value not only cannot be aggregated, but also that they would generally be recognised as such by many people. Ultimately, Ashley-Smith produced five broad categories of value, along with a list of words commonly associated as descriptors of the values. Despite basing the categories on the outcome of rigorous

research, Ashley-Smith (ibid.) admits that this is a personal view of the divisions, which would not then preclude the proposal of alternative divisions, provided that these were supported through argument. The descriptors are enhanced (and indicated in italics) in the 'cultural' category with contributions from Keene (2005 : 162) and Throsby (2001 : 29, 29).

The table now holds two possible placements for 'aesthetic value', this demonstrating the subjectivity of value assignment and reinforcing notions that perceptions of value are a social construct (Ashley-Smith (1999 : 81). 'Aesthetic value' is frequently subsumed under 'cultural value', since it is often associated with status and display and the context of museums and galleries. Yet the placement of 'aesthetic value' under the 'emotional' category is equally valid, if the category is accepted as being separate, since objects that possess 'aesthetic value' often promote a strong limbic response form the viewer, which could override any cultural associations.

The 'existence' category would not necessarily occur to people unless prompted, but it does augment the canon of value. 'Existence value' pertains to the premise that people can attach value to things that they have an interest in persisting, but have not seen or may never see, such as the Pyramids in Giza. In knowing that something exists and caring about its continued existence, such as the rainforest, 'existence value' can be invoked (Kopp : 1992).

In the development of the structured questionnaire, I need to devise categories for object value, to provide options for the answering of the question, "Why has an object been preserved?". I needed to ensure that the categories did not display much overlap, but also have enough separation of concepts to allow meaningful analysis. The categories can be seen in Figure 2.2 below :

Value category	Descriptors
Functional	Use
Cultural	Authenticity; historical; political; social; spiritual; symbolic
Personal	Personal narrative
Capital	Exchange; monetary
Aesthetic	Aesthetic
Educational	Documentary; scientific; perceptual

Figure 2.2 : Value categories as used in the structured questionnaire

There are some strong similarities between this designation of value categories and those of Ashley-Smith. 'Functional' value has been separated from 'economic' (here 'capital') value, since many artefacts are manufactured with functionality as a primary purpose or value. 'Aesthetic' value has been separated from 'cultural' value and emotional' (or as above, 'personal') value, because there are occasions when art can be appreciated solely for the way it looks, although this is not always the case. 'Educational' value and 'informational' value are essentially different ways of describing the same value. With this exception, there is a good deal of convergence of principal values. 'Existence' value is not explicitly reflected in the structured questionnaire, as it only deals with existing objects.

The recognition of value types helps to provide a framework for further discussions about the relationship of artefacts and their values. State change, for example, deterioration in artefacts, has been observed since ancient times, as evidenced by the Biblical instruction from the 1st Century AD, "Lay not up for yourselves treasures upon earth where moth and rust doth corrupt." (Matthew, vi, 19).

It therefore follows that if objects can change states, then there is the potential for them to also change in value. For example, as a functional object becomes worn or damaged, it would become less useful, thus diminishing in 'function' value.

Since there are different types of value that can be associated with artefacts, it would seem that there might be various ways in which these values could change. Loss of value has been alluded to, which means that positive value changes – value gains – could also occur.

Thompson (1979) provides thesis for the observation and mechanisms of changing artefact value in his "Rubbish Theory". Thompson sets out a three tier system representing different levels of value, in which each artefact begins life in his 'transient' category; which sits above the 'rubbish' category (and possible oblivion) and beneath the 'durable' category (and expected longevity and preservation). These categories represent different phases of an object's life. An artefact's value level is set when it is first exchanged for an agreed price – a figure that would be determined by market forces. This launches the object into its 'transient' phase, from which point its value (economic and cultural) is considered to decline over a period of time. The reasons for the loss in value can be physical, such as damage that compromises functionality, or social, for instance changes in fashion, rendering the object obsolete; or even loss of interest in the object. Whichever reasons contribute to the value decline, the object moves towards the 'rubbish' phase, at which point the artefact is considered to have no value. The length of time an object might languish in this phase is variable, but the 'rubbish' phase may persist for a considerable time, provided that the object is not destroyed. During the 'rubbish' phase the object is usually hidden from view (Thompson, 1979 : 9), placed in a drawer, cupboard, a back room, cellar or loft. It is interesting to note that museum collections in stores resemble hidden objects of the 'rubbish' phase and Ashley-Smith (1999) poses the question of whether this could be considered to be the case. If the artefact survives in the 'rubbish' phase, it has the opportunity to be elevated into the 'durable' phase, where value is perceived to be high, and usually higher than the artefact's initial exchange value. The mechanism that catalyses the change can be the cycle of fashion, whereby the wheel has turned far enough to bring about renewed interest in the 'rubbish' item. Rarity can augment the chances of a successful transition to durability, since the destruction of similar examples automatically boosts the value of the surviving comparisons.

Thompson (ibid.) makes it clear that the transition between categories is linear, as shown below :

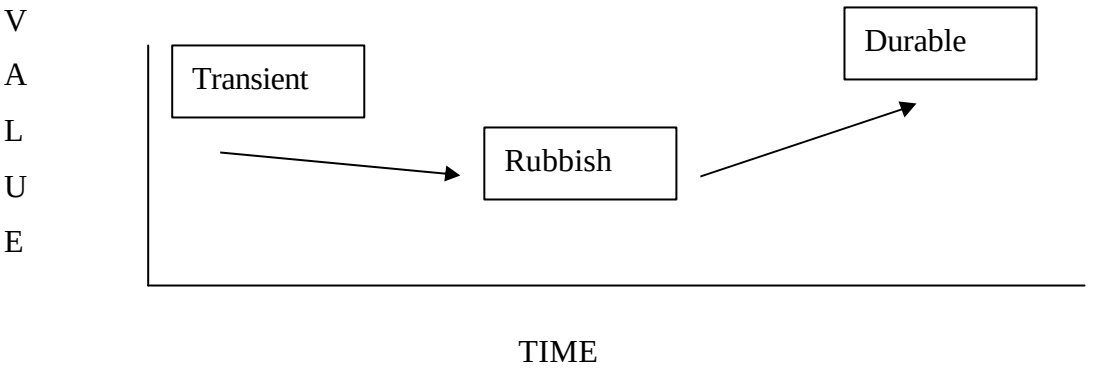


Figure 2.3 : Rubbish Theory, extrapolated form Thompson (1979 : 10).

According to Thompson, this is the only pathway, so the following pathways are not travelled –

Rubbish	→	Transient
Transient	→	Durable
Durable	→	Rubbish

Thompson (ibid, 18) asserts that the limitation exists because people who own 'transient' goods belong to a set with a fixed world view about object values, and those who own 'durable' artefacts possess a different, but equally rigid view, which precludes the movements shown above. It is possibly correct to assume that much of the time these rules persist, but there are occasions when exceptions apply. With the 'rubbish to transient' pathway, this would seem to be satisfied by the intervention of a car boot sale (or equivalent). The 'rubbish' items are cleared from their repositories and sold for a small sum to a buyer who will cherish the novelty of the items for a limited period before they return to the 'rubbish' category. The 'transient to durable' pathway is perhaps a slightly rarer phenomenon, since it requires very specific circumstances. One of the most salient examples would involve modern art. In the 1960s in New York there was a thriving are scene, but many of the artists were relatively poor, because their work was sold directly by them for little more than the value of the materials employed. Robert Scull (owner of a taxi business) collected prolifically from struggling artists, and then loaned the works to prominent galleries.

This action raised the profile of the people and the paintings, and thus the value of the paintings. When fifty pieces were auctioned through Sotheby's in October 1973, they turned an enormous profit and moved the artefacts from 'transient' to 'durable' with no in-between phase (Hughes, 2008). Finally, the 'durable to rubbish' pathway is the least likely to occur, but can happen over a long period of time. This could represent the fate of some 'durable' heirlooms. An heirloom can be passed down to descendants for a number of generations, but if somewhere down the line it is no longer appreciated, perhaps because it is too large for the home or does not fit with the décor, it could be relegated to a storage space. This does not automatically represent transition to 'rubbish', since the object may retain high economic value. However, if the trend of passing from one generation's attic to the next persists, the personal value associated with the historic narrative of the piece can be lost, seriously diminishing the personal and possibly cultural value. The reason for keeping the artefact is lost and over a sufficiently long period of time the object might decay and thereby be considered to be rubbish.

Later in this chapter I discuss the development of my Theoretical Artefact Value Curve ('TAVC'), which shares many elements with Thompson's 'rubbish theory'. There is the transition from relatively high value at the start of an object's life, to a trough or low value as the initial value diminishes, followed by a steep increase in value if the artefact survives the trough. One major difference is that the curve can iterate as an artefact moves through its life. In other words, an artefact could reach the top of the second arm of the curve and start a descent into a new curve. The probability of this happening would be determined by the longevity of the object and changing economic and cultural circumstances. Yet there is nothing to preclude this movement, unlike Thompson's model as above.

Thompson maintained that during the 'rubbish' phase, objects held no value. On the one hand this is a conceivable premise, because something that is inaccessible or forgotten about is not culturally active or subject to the social constructs of value. On the other hand, it could be argued that through its continued existence the artefact still retains the vestiges of value and potential value, which may later be realised in 'durability', or 'reinvigorated utility' in the case of the TAVC. This is why the TAV curve has an adolescence phase described by Latent Minimal Utility (see below).

Having established that artefacts can change in value, it is important to investigate whether or not this value can be measured. Economic value of artefacts can be measured through auctions or other exchange forums. Cultural value (which can be used as shorthand as a dominant alternative value form) is much more difficult to represent in standardised units. However, attempts have been made to remedy the problem, and Ashley-Smith (1999) and Throsby (2001) both discuss the concept of WTP, or 'willingness to pay'. According to Ashley-Smith (1999 : 92) this is a CVM ('contingent valuation method') – a means of enabling values of objects not traded in markets to be estimated. Cultural artefacts such as museum objects fell into this category, since people are spending money on the experience of visiting an artefact, rather than buying it. WTP is a measure of what people are willing to exchange (for instance money) or give up (for instance time) in order to gain benefit from an object. A person's willingness to pay could be gauged through observation of their activities and how much time and money is put aside to experience cultural artefacts. Alternatively, people could be polled to see what response they would supply when questioned about their willingness to pay (Throsby, 2001 : 32). Establishing that someone is prepared to expend time or money to engage in a cultural experience, does not in itself provide a solution, because it demonstrates that cultural value is perceived to exist, but not a means of quantifying the value in a directly comparable way to economic value, as people are not being asked what they would pay to own the object in question. People could be asked to rank their willingness to pay for one artefact against a range of other cultural objects, thus establishing a relative scale, but this still does not create a unit of measurement (Throsby, ibid.). Sometimes there is a correlation between cultural and economic value, since a work of art perceived to have high value might also realise a high economic value if sold. However there are examples of inversely proportionate relationships between cultural and economic value. Atonal classical music (with limited popular appeal) might represent high cultural value, but low economic value. On the other hand, soap operas on television generate very high viewing figures, so have high economic value, but low cultural value (Trhrosby, 2001 : 34). Even though a unit of measuring values has not been revealed through 'WTP, there s still merit in the concept.

An additional CVM is the concept of 'public value', which has revealed that the public and artefact professionals do not always value culture in the same way. In the mid 1990s, Mark Moore from the Kennedy School of Government, USA, first developed the notion of 'public value' (Brooks, 2007 : 42). The concept was soon adopted by Britain's Labour government, to be used as a tool for reform, when public involvement was employed in a review of services, based on how the services were 'valued' by the public (Kelly : 2002). The public service review was not dealing with economic value, but how a service was valued by 'making a difference' – an intangible factor. Once the government had engaged with the notion of 'public value', it was possible for heritage organisations to use the model to establish how the public would evaluate 'cultural values'. On the one hand it would appear that public involvement might benefit heritage organisations, as they could demonstrate to the government the extent of the value perceived in heritage by the public, since this could lead to grants and increased resources (Accenture : 2006). However, public opinion can of course be at odds with professional opinion. Edward Impey, Director of Research and Standards at English Heritage has recognised that within conservation itself, conservators have to engage with conflicting values, such as in the case of Seahenge, the Bronze Age timber circle revealed on the Norfolk coast. Here, the future of the monument was contested by those who favoured an evidential value system and those who supported a spiritual value system (Brooks, 2007 : 42). The great public interest in Seahenge served to complicate the debate, since it raised the question of who is entitled to make the decisions pertaining to treatment. Simon Thurley (2006 : 97), Chief Executive of English Heritage, is aware of such "expert-public cleavage" and has declared that, "experts have a vital educating and mediating role in developing public preferences". It is undoubtedly the case that the general public is already informed of cultural heritage to varying degrees, which means that the perceived significance the populace feels towards heritage will be varied. It is certainly possibly that 'experts' can provide a fuller picture of cultural heritage and supply contextual information that may not be available to the casual observer. Yet whether such information will actually influence how individuals choose to value the heritage is a moot point. It is all too easy for the expert to assume the role of pedagogue or parent to the public's pupil / child, since it is customary for the expert to inform. What should not be taken for granted is that the public comprises experts in different fields, who can help contribute to the value debate and provide novel

perspectives on which objects are valued and how value is attributed to them. These hidden experts may, for example, be members of indigenous groups who might be able to supply contextual information previously unavailable.

Types of value, changes in value, and measurement of value have been explored to this point. It is also necessary to consider value itself; and this next section examines a variety of values in context and the development of the value hypothesis, culminating in the Theoretical Artefact Value Curve referred to above.

The notion of value is familiar to most humans. Definitions of value tend to be cognisant of the Latin origin of *valere* (the verb "to be worth"), stating that value pertains to the "desirability of a thing, often in respect of some property such as **usefulness** or **exchangeability**" (OED). Worth, merit or importance are also cited as elements of the noun's meaning, the relevance of which should not be overlooked, since these more abstract concepts are embedded in the general concept of value. It is important to recognise that the combined association of "usefulness" and "exchangeability" with value is a relatively modern assertion, derived from Adam Smith's economic theories expounded in his 1776 "Wealth of Nations". Artefacts can be described in terms of the value they possess, since every object has a degree of utility, exchangeability or other merit that can be compared to other objects. In some instances the value is easily quantified, when for example an object is exchanged for money, which has an accepted worth. However, in some cases value cannot be articulated in an overtly measurable sense, and so the statement that an artefact is important for any given reason ought to establish that it is valuable.

A definition of value has been put forward which might afford an understanding of what "value" is, but this does not explain satisfactorily how artefacts acquire value. By returning to Adam Smith and his early theories of value it is possible to determine how modern perceptions of value were fostered. According to Hanson (1966; 206), Smith identified two forms of value, which he dubbed "value in use" and "value in exchange". The former is dependent upon the utility (or satisfaction) derived from the object, the latter determining the price at which it could be sold. Adam Smith's

division of value was devised to explain an economic conundrum known as the "paradox of value" (Ibid). It had been noted by Smith's predecessors that a commodity such as water had great "value in use", but often a low exchange value. On the other hand, a commodity such as diamonds possessed a relatively low value in use, but conversely a high value in exchange. Smith recognised that the difference in outcome could be explained by the marginal utility of each commodity. The marginal utility being the extra satisfaction gleaned from acquiring a further unit of each commodity. Where the resource is plentiful, such as water in the UK, the marginal utility is low and so, by association, is the exchangeability. Where the total supply is smaller, as in the case of diamonds, the marginal utility and exchangeability is greater. In terms of assigning value to objects Adam Smith postulated that this depended directly upon the amount of labour expended in an object's production. Therefore, the greater the labour effort expended, the higher the value. Successors of Smith's "Labour Theory of Value", such as Ricardo and Marx formulated similar theories of value. Ricardo did, however concede that rare artefacts and works of art had exchange values determined by scarcity and, therefore, not explained by the labour theory (Ibid). The inability of the theories to explain value for all categories of object is a major flaw.

Labour theories of value provide a partial insight into the assignment of value to objects, but fail to reveal a full explanation, since human labour costs were contended to be the sole source of any value. Such an approach instantly dismisses the costs of resources, other factors of production and the impact of potential market forces. What is more, labour-value theory completely ignores the utility and scarcity aspects of value. Even if a Marxist economist was to concede that input and output costs constitute legitimate contributions to an object's value, the notion of "utility" would still be refuted as "unscientific" (Seton: 1992; 14). Value derived from utility or scarcity might be regarded as unscientific, since the satisfaction derived from an object is a subjective measure. Despite this, utility, if not by name, is recognised as a concrete factor of reality by consumers and should not be discounted from valuations. Utility in fact goes a long way to explaining value in categories of object with limited functionality or overt exchange potential.

It need not cause consternation that the labour-value theory offers a very exclusive approach to the question of value, since it was self-consciously designed to focus on the value of labour "to expose and indict the presumed iniquities of capitalism, its injustices, and exploitative nature" (Seton: 1992; 12). Other factors of production were, therefore, deliberately ignored. As an antidote to the "cost-fetishism" of labour-value theory subsequent economists, such as Leontief and Straffa, have worked towards the concept of "eigenprices", integrating utility within the system. Eigenprices are a "set of valuations through which commodities are priced at their marginal costs in terms of the factors absorbed in their production, while the factors are priced at the marginal contribution they make to the total value of the commodities so priced" (Seton: 1992; 15). This more holistic approach makes greater economic sense, but it seems to have suppressed the multifarious essence of value that subsumes the notion of merit and importance in an object and have replaced it with "price" (Seton: 1992; 11).

Modern economic theory is capable of object value in terms of production and primary exchange, but as Ricardo noted, it does not seem equipped to explain value in artworks, rare objects or antiques. Economic theory can cope with commodities with measurable or predictable production costs and exchangeability, which is what the awkward categories of commodities outlined above lack. With some works of art, if it was possible to retreat behind the uncompromising wall of labour-value theory, it could be argued that these possess a high value, because much effort was expended in their production. However, given that this is not a viable option it becomes apparent that the value of art is reliant upon its utility or satisfaction that can be derived from it, which would vary from person to person, depending upon the aesthetic preference of each. Art, according to the subjective merit afforded to it, can be granted "aesthetic value", but not necessarily a price. Rare objects, under which some antiques might be subsumed, tend to have a high marginal utility, because the total supply of each commodity is relatively small. Yet this in itself does not help to establish an economic value. Production costs here are not necessarily known or relevant and exchangeability is linked to individual perceptions of utility. Scarcity might cause the value of objects in each category to be relatively high, but it does not necessarily follow that a price can be determined from this.

Economic value theory can be employed in an attempt to attach a financial value to a commodity. However, as has been demonstrated, it is not always easy to establish what this value might be. Yet when an object can be labelled with a price it could be said to possess economic value. Economic value is by no means the only way in which artefacts can be valued. As Marx astutely noted, "nothing can have value without being an object of utility" – a terse statement that encapsulates the extent of value. As long as an artefact is perceived by its owner to possess utility it has value and the definition of that value can be determined by the owner. The value of artefacts can then be discussed in their real social context, beyond the rarefied and restrictive bounds of economic theory.

Some artefacts, especially those with low economic value, have a life that is very short. In the case of short-lived functional commodities the "value" of the object might not alter, since the utility that the artefact possesses during use does not change. A germane example would seem to be the chip fork, since such a utensil is often used but once in aiding the consumption of a portion of chips and is then discarded with the wrappers. The fork's functionality is its utility value, or "value attribution" and it exists as a convenient device that allows food to be eaten without the hands becoming greasy. Yet its functional value is usually not great enough to warrant retention of the article after the meal. Chip forks are abundant and a discarded one can be replaced with a new model on a subsequent visit to the chip shop. The fork's value in use is high, but immediately diminishes after the meal. This fact coupled with the utensil's low marginal utility helps to explain why the object is not retained.

By contrast to the chip fork, canteens of cutlery often have a longer life cycle and are more likely to be subject to changes in "value" during that time. Napoleon Bonaparte (1808-1873), Emperor of France owned a canteen of aluminium cutlery – a fact, though unusual, that might sound unremarkable in this day and age (Quinion: 2000). However, aluminium was a rare metal in the nineteenth century, due to the complex and difficult nature of its extraction from its ore. As a result the metal was extremely valuable, since it was both desirable and expensive to obtain. The Imperial cutlery possessed a number of concurrent values during the life of its owner, the most prevalent of these being functional value, since the set was designed to be used to its fullest extent. The cutlery was brought out for important occasions, such as State

banquets, and so was possibly employed to impress guests with its aesthetic qualities (Ibid). After Napoleon's death the cutlery might no longer be used in the conventional sense and although the functional properties may not have diminished *per se*, the functional value will not be a prevalent concern. The cutlery would instead take on a cultural dimension and attain an altered value dependent upon their ownership by a famous military and political leader. This in turn would contribute to a retention of financial value that has more to do with associated celebrity than it has with the inherent value of the material.

To this point only a narrow range of values have been discussed even though any perception of utility in an object can be regarded as a "value attribution". What must not be overlooked is that perception of value can be profoundly cultural and it should not be assumed that the same value would be recognised by different social groups. Nevertheless sometimes the value of artefacts can be appreciated by cultures outside of the society that creates the objects and first invests them with value (the producing society). If the object is functional, for example and is witnessed in use, it might be possible to recognise the functional value even if the reason for the item's employment is not fully understood. Conversely, if an artefact is inculcated with symbolic value the existence of such value might not be visible outside of the experience of the producing society. The artefactual value to outsiders would be rendered esoteric, potentially leading to conclusions that value attribution is subjective. However, value attribution can usually be contested or seen in relative value terms within an artefact's extant cultural framework, thus lending the value an objective quality.

A number of the examples of value attribution below concentrate upon specific ways in which artefacts can be valued. This, however, does not necessarily preclude the existence of other simultaneous values associated with the objects in question – it merely highlights particular permutations of value. Almost invariably an artefact possesses multiple forms of value, usually some more prevalent than others. One reason for numerous value associations in an artefact is that an object can be involved in the dynamics of social relationships such as trade and exchange, where its value to one party as a commodity is less to another group that imbues it with ritualistic value, thus fulfilling at a given time different value-assigned roles. According to Hodder

(1982: 55, 85) artefacts are "symbols in action" which "play an active part in forming and giving meaning to social behaviour" and in turn these "symbols" receive meaning from and are informed by their cultural context. It is not uncommon for artefacts to be referred to in the terms of their "life histories", suggesting in itself changing circumstances during the existence of the object, along with the sense of the artefact being vital and dynamic. The vitality of an artefact, however, would seem quite dependent upon it being regarded to be valuable, since an item without value is likely to fall into disuse and symbolic demise.

Artefacts can have value as commodities, acting as capital in exchange or trade patterns. Yet, to reaffirm the notions outlined above about multiple values, the commodity value is often not the only value attributed to an object. The people of Luzon in the northern Philippines are prolific manufacturers of textiles. Some of the textiles produced are prestige goods that symbolise status and wealth, such as skirts, loincloths and funeral blankets (Milgram: 1991; 134). These artefacts can act as commodities that can be sold or exchanged for other goods (Ibid: 132). Through these exchanges the new owners of the textiles might reintegrate them into the symbolic role of status goods, thus altering the emphasis of value attribution. At times the textiles are of value for strengthening social ties. On such occasions prestige items are divided amongst community members, establishing the status of the donor and the wealth of the recipient, symbolising community welfare (Ibid). In turn the recipients are obligated to the donor to undertake favours or similar reciprocated donations at some unspecified future date.

In some instances, taking as an example the Tlingit Indians of the Northwest Coast, objects that have been valued for functionality can become valued as commodities when new trading networks are established. In the late nineteenth century Euro-American traders encouraged the Tlingit to produce items fabricated employing traditional basketry techniques. Some of these artefacts served a functional purpose, but other items replicated Euro-American forms, such as tea-kettles and hats. From a Tlingit point of view these articles satisfied the traders' tastes and acted as commodities. From a Euro-American trader's perspective these were valued as aesthetic novelties and potential commodities for re-sale. The functional element was

no longer present in the basketry, because it was not a value requirement in the trade relationship (Wright: 1996; 51).

Igbo women (of Africa) value aesthetic aspects of utilitarian objects, because this beauty is felt to enhance the beauty of the owner (Aniakor: 1996; 233). Artefacts such as earthen bowls, hairpins and wigs assert their power of beauty through display in the house and the accumulation of such objects also serves to advance the social status of the woman (Ibid: 227). One could postulate that aesthetic qualities are desirable in many objects, including those with utilitarian roles. This assertion seems to highlight the observation that there is apparently little "art" that is valued only for its capacity to delight. Works of art from a twentieth century perspective, especially in the Western World, are often valued as potential commodities – in other words, investments. Even when there is little intention to realise the investment, the artwork can often be valued as a status symbol, since art is usually displayed. According to the Iban people of Borneo, famed for their woodcarvings, aesthetic objects are not designed merely to please. Rather utilitarian objects are crafted beautifully in order to inspire the user to create further aesthetically active objects, the fabrication of which enhances the beauty of the producer (Heppell: 1991; 35). The Orang Ulu, also of Borneo, perhaps come close to producing "pure" art that is valued for its beauty. Yet even this art "functions chiefly to reflect and enhance the prestige and power of the aristocrats" whose houses are decorated by the Orang Ulu artists (Langub: 1991; 22).

Some social groups such as some of the Northwest Coast Indians believe many objects to be replaceable – even some inherited objects, since the symbolic value associated with an artefact can be transplanted or instilled in a different vessel. However, some modern Western groups attach value to items that are irreplaceable. For example the favourite cardigan of a deceased relative, no matter how worn it might be, is valued due to its association with the ancestor. The item might possess little functional, aesthetic or monetary value, but still be of immense personal value. The garment, in this instance is not only commemorative, but also possessed of powerful symbolic value that could never exist in an identical item not previously owned by the deceased. The value is intimately linked to the very existence of the artefact, since it is almost imbued with the essence of its erstwhile owner. Even the act of washing the cardigan might be considered an eradication of some of the essence

that cannot be renewed or replaced. Such value is based upon context and social constructs. Subtract from the equation the caring relative and the very same cardigan could be sold at a charity shop. To the new owner the garment would merely possess some functional value until it wears too thin and is possibly discarded, to be replaced by a newer version.

Until the 1960s gourds or calabash were ubiquitous in Africa. These tough-skinned fruits could be hollowed out and made to perform a number of functions, including: bowl, bottle, spoon and container. Calabash were plentiful, relatively easy to cultivate and inexpensive to buy at market. Despite these factors that favoured the replacement of damaged articles, it was discovered in the course of anthropological research that calabash were often repaired in preference. According to Dagan (1992; 49) the owners of repaired calabash, when questioned, tended to cite personal reasons for maintenance and retention. One woman, for example, explained that she was fond of her gourd because it was a present from her mother (Ibid).

It would seem that some Mayan heirloom valuables, such as jade body ornaments were valued for the "historical truth" that they possessed (Joyce: 2000; 211). These artefacts were usually passed between members of household groups and were sometimes inscribed with the names and titles of their past owners. The "name-tag" texts "inscribe a specific history for and on the object [….giving] the names of human beings permanent material form" (Joyce: 2000; 208) and serve to reaffirm the status and affiliations of the contemporary owner. Ownership of such an heirloom would seem to confer a certain amount of political power, since the receiver is not obliged to pass the artefact to an heir, but can be render the item "mute" through loss or discard, or change the appearance of its history through physical alteration (Ibid). In any case, the treatment of the heirloom becomes a historical statement.

Perfection is a facet valued in some artefacts, but this assertion requires some qualification. Physical perfection or apparent flawlessness is regarded to be the most desirable condition for cut gemstone, for example. It is interesting to note that perfection in objects heralding from the natural world is particularly sought after, since this tends to be the exceptional state. Precious stones almost invariably display small inclusions, cracks or imperfect hue. Conversely in industrialised societies,

where some artefacts are manufactured by machine, sometimes imperfect examples are sought after. This diametrically opposite valuation might not, however, be as contrary as it might seem. Machines are designed for uniform output, but occasionally variations, or "mistakes" occur. Since the errors are encountered infrequently the imperfect products are unusual and possess rarity value. Postage stamps are examples of when printing errors can enhance value, since philatelists appreciate the exceptional nature. Thus it is rarity that is valued, with people attributing value to that which they do not have.

An artefact might be valued for the materials from which it was fabricated – especially if these are expensive or rare. For example a royal princess of the T'ang Dynasty, China, was said to have presented to the temple at Lo-yang a three foot high incense-burner decorated with an hundred precious stones, including pearls, amber, coral and chalcedony. The creation of the piece was thought to have exhausted the royal treasure (Beurdeley: 1966; 41). Durability is another important characteristic in terms of the materials employed. Among the Luzon people of the Philippines, for example, the artefacts that are likely to become heirlooms to be passed between the generations are those whose physical form remains relatively unchanged. Such items are regarded to be permanent. More ephemeral objects tend not to attain heirloom status, because their survival for transmission to future generations cannot be guaranteed (Milgram: 1991; 28).

The ethnographic case studies above detail a variety of different value attributions that can be recognised in objects. However, the examples tend to focus on single aspects of value, thus presenting a distorted picture of value in objects, since the reality tends to be more complex. It would seem that many artefacts begin their life with an initial value (where there is more than one apparent "value" there is usually a predominant value), such as functional value and as the object is used this value diminishes. With the example of a ceramic cooking vessel, it is first valued because it performs a utilitarian function. During use it gradually becomes chipped and cracked, but still retains its functional capacity. However, on one occasion it is dropped and breaks into two parts, thus drastically reducing its primary value. There is now a possibility that the sherds will be discarded, thus ending the cycle of the object. Yet there is a chance, especially if the pot was a favourite vessel that attempts might be made to

repair the damage. The joined artefact might no longer withstand the ravages of heat, but it might still be of use for serving food. Since the vessel still possesses utility to the owner it has taken on a new set of values. Beyond this point the value of the object is likely to remain low and the pot might eventually find its way to a midden. Some time later the same vessel could be recovered during an archaeological excavation, perhaps in several more pieces. The value for the archaeologist is the pot's potential "educational" value, since it might yield information about the social constructs of the culture that caused its fabrication. If all the sherds are recovered the vessel might merit reconstruction for illustration, publication or perhaps museum display – the possibility is enhanced if there are few complete extant examples of such artefacts. Along with the change in value attribution, which now includes educational value and value via rarity, it can be argued that the overall value of the artefact has increased from its lowest ebb i.e. the point at which it was discarded. Therefore, if the value of the object was quantified (in arbitrary units) over the course of its history it could describe a curve on a graph. Hypothetically this curve would start high and then drop away as the initial value decreased through use and damage and eventually obsolescence. Upon rediscovery (in this instance), the artefact adopts a new set of values, which are higher than during the previous phase of the life cycle.

It is possible to depict the three-phase curve described above, which can be referred to as The Theoretical Artefact Value Curve (TAVC) and seen below in Figure 2.4. It can be suggested that most artefacts that experience changes in value attribution and economic value will follow this curve to an extent. No time scale is indicated, since the life cycle of artefacts is infinitely variable and thus different artefacts might pass through the phases at different rates. The first shoulder of the curve represents the FUNCTIONAL period of the artefact's history, or the Activity Induced Diminishment of Utility phase (AIDU), during which time the object maintains its initial value attribution, thus fulfilling its original "function"(s). During the AIDU phase the "values" of the artefact begin to diminish as damage through use and/or the ravages of time begin to erode the utility of the object. Extra-physical factors, including improvements made to subsequently produced objects that add to the utility value of the new commodities. Simultaneously the potential to possess extra utility value detracts from the utility of the original artefact, thus leading to a comparative erosion of the object's utility. The decline in value is progressive and leads into the

OBSELESCENCE, or Latent Minimal Utility (LMU) phase of the curve – a trough - where the object is infrequently used for its original purpose and the utility of the artefact is barely perceptible. There is a possibility at this juncture that the utility of the item is so low that the object is deemed effectively worthless and discarded. (Yet the life of an artefact only ends when the object is destroyed through deliberate means or deterioration, since even buried artefacts can be exhumed). The curve abruptly ends then for such artefacts. However, for artefacts that endure the LMU phase these tend to pass the ultimate phase of the curve – the PRESERVATION/CONSERVATION, or Reinvigorated Utility (RU) phase. This period is depicted by the rising tail of the curve as the artefact regains value through the assignation of new values. Here the artefact might be valued for its antiquity or its rarity. The latter is especially likely to be the case if many comparative examples were lost to posterity through damage or discard in the LMU phase. What is more, the better the physical condition of the object as it enters the final phase of the curve, the more highly valued it is likely to be and the greater the probability that preservation effort will be invested in it, since the item might be deemed "collectable" or "displayable". The utility or economic value of the object might be higher than it appeared in its AIDU phase, due to its new status and the effort invested in preservation or conservation. Other factors, such as the degree of rarity and aesthetic worth, for example, may greatly influence the level of utility.

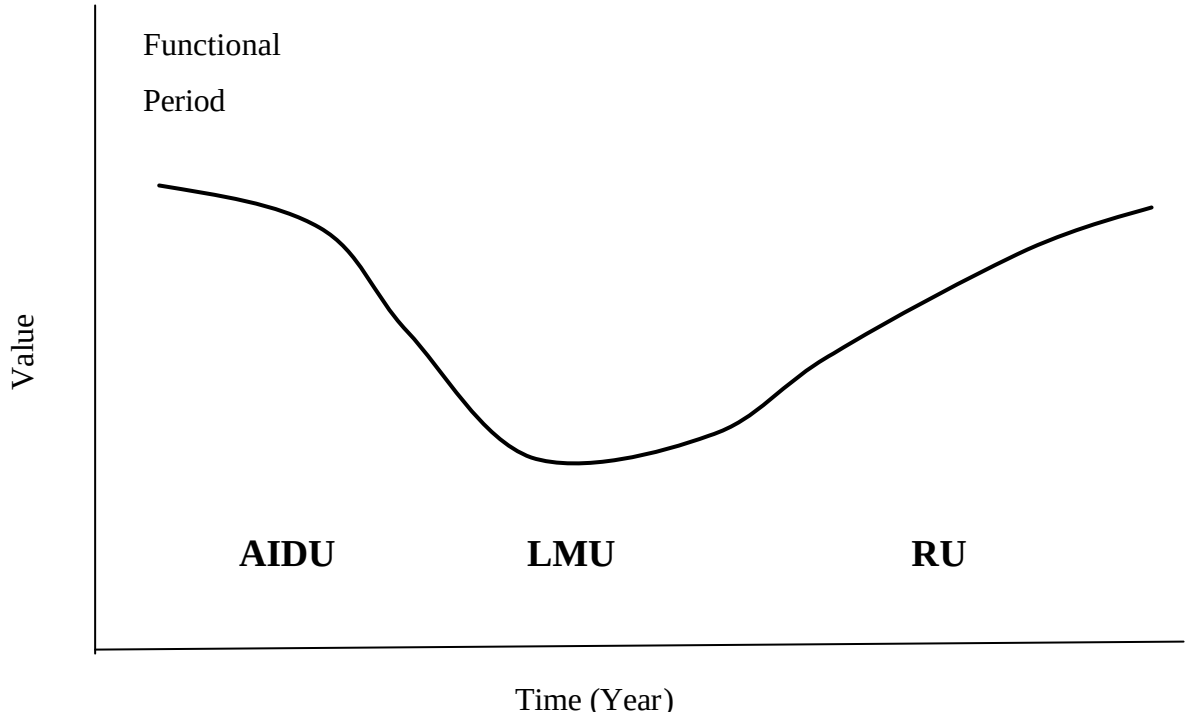


Figure 2.4: Theoretical Artefact Value Curve (TAVC)

In order to test the proposed TAVC curve it is necessary to seek evidence for the changing value of objects over time. For this purpose defined units of measurement were required to compare value throughout time and the one of the few usable and objective options pertaining to artefacts was financial value (i.e. cost). In order to build the curve very particular requirements needed to be met if the curve was to accurately reflect reality. Examples were sought of specific objects created at a known time, the monetary value of which was recorded at regular, successive intervals. Very few artefacts match these criteria, but both vintage cars and postage stamps were selected for the investigation, since these groups have prices available from dedicated guides that indicate average prices that a buyer could expect to expend on the purchase of a specific item in any given year. "Glass's Guide to Car Values" was used to establish car values and "Stanley Gibbons" catalogues were employed in the research of stamp price. The expectation was to replicate the curve by plotting the value of each artefact from the date of inception to the present day, or over a period in the object's history that encompassed clear changes in value. Due to limited data it was only possible to cover sections of the curve for each artefact. The results shown

in Figures 2.5, 2.6, 2.7 and 2.8 indicate that each phase of the curve could be shown to exist in practice.

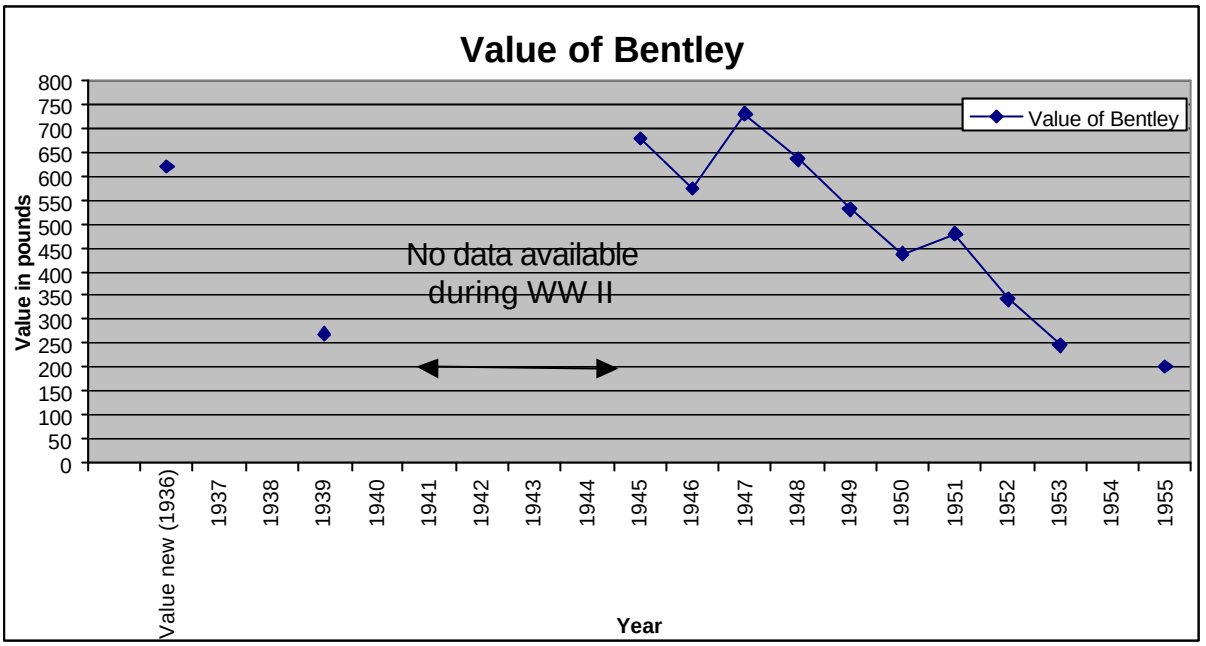


Figure 2.5: Value of Bentley in pounds

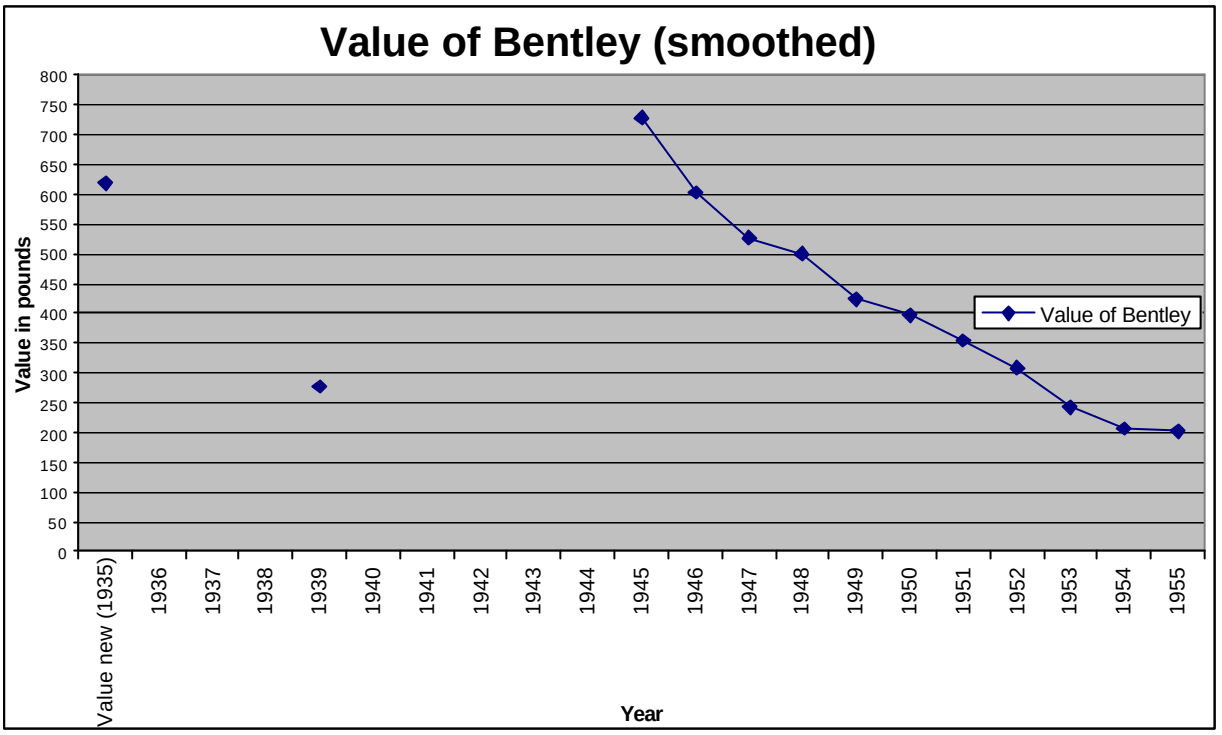


Figure 2.6: Value of Bentley in pounds after 3-point smoothing

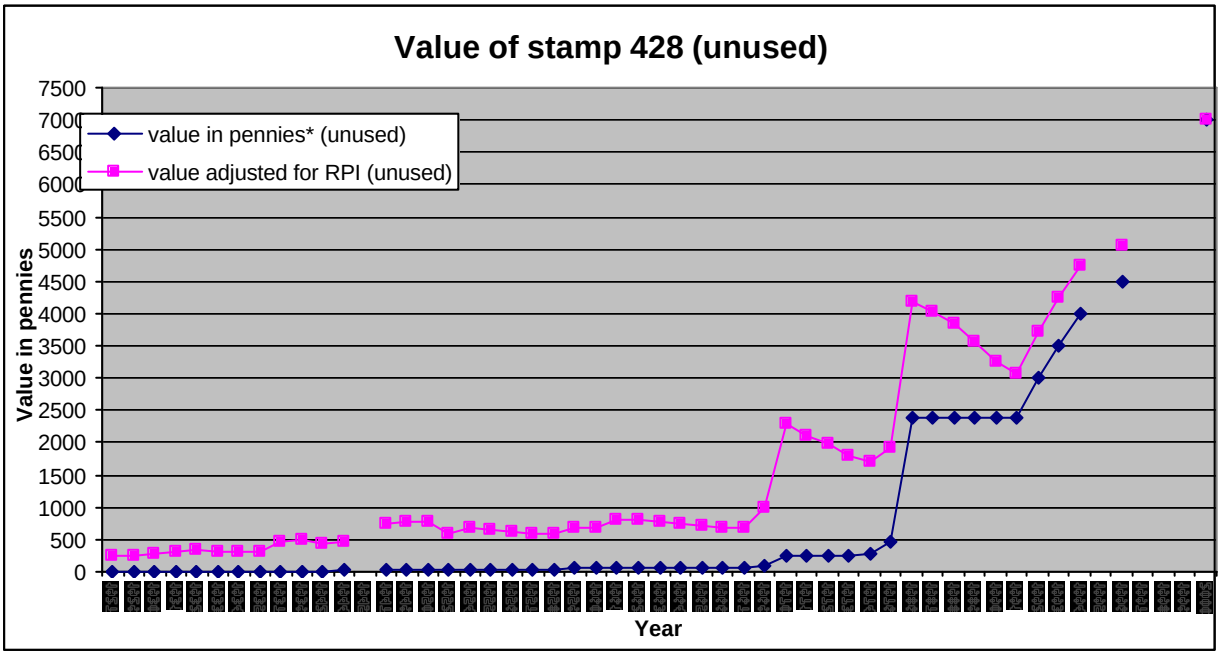


Figure 2.7: Value of 1924 10d (blue stamp, catalogue number 428, showing value in pennies and adjustments for RPI

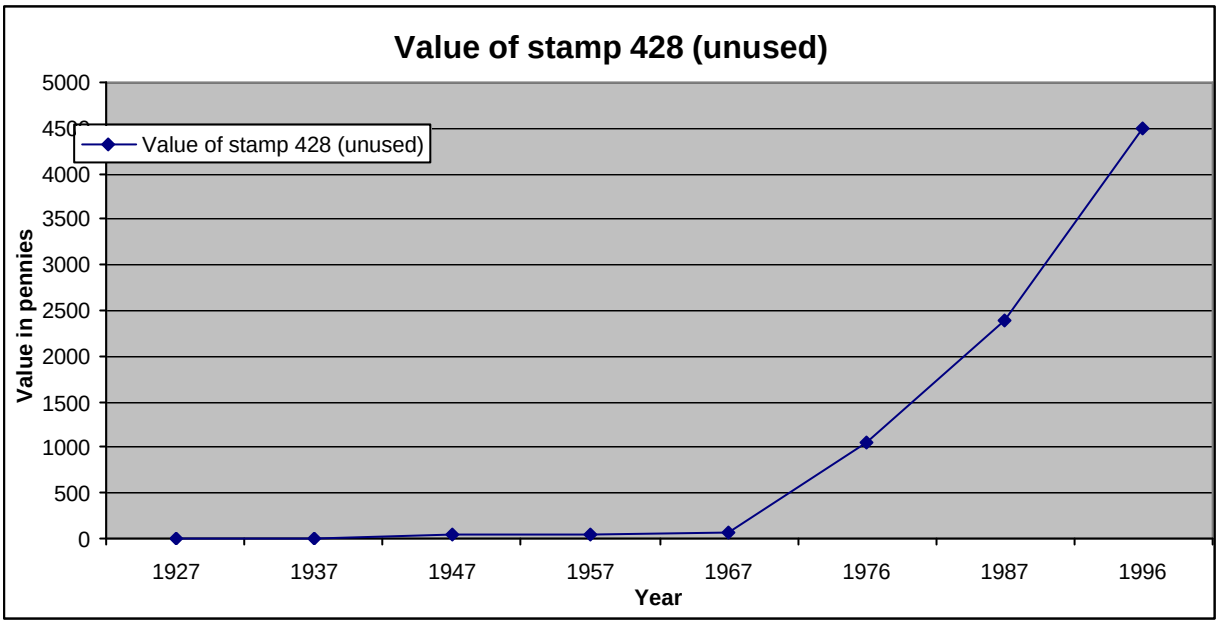


Figure 2.8: Value of 1924 10d (blue stamp, catalogue number428, showing value in pennies after 3-point smoothing

Between the two sets of data each part of the TAVC curve can be illustrated – the cars demonstrating a move from the AIDU phase into the LMU phase and the stamps, the ascending arm of the RU curve. The graphs for both data sets were subjected to three-point smoothing, so that the overall trends could be viewed without the interference of small fluctuations caused by annual variations in market forces. The cars help to demonstrate the early trend of the curve, showing value dropping away with time, as the vehicles become more worn and plunge towards the LMU phase. Since the Glass's Guides do not publish details of cars that are old enough to be classed as vintage, the final part of the curve cannot be gleaned from this source. Glass's Guides were not produced during the Second World War and it is noticeable that car prices immediately after the War are, in some cases, higher than their starting value. This was influenced by the unique situation at the time, which included continued rationing, limited car production and shortages of metals with which to produce new vehicles. The result of this was inflated prices for second-hand cars. However, this did not stop the inevitable drop in value in subsequent years that was a function of the wear and tear of the vehicle and diminished utility.

Calculations for RPI (Retail Price Index) were made for the stamp prices from each year, so that the figures could be brought in line with inflation to check that this factor did not affect the trends. As it can be seen from Figure 2.7 (above) the values adjusted for inflation and the quoted prices do follow the same curve. It is interesting to note that postage stamps do not tend to lose their face value, even after use, perhaps because they are instantly collectable, thus circumventing an obvious LMU phase with a drop in value. However, the RU phase does not tend to start for some years after the first issue date, perhaps because there are still a large number in circulation, thus precluding a value that might be attributed to subsequent rarity.

The resulting graphs from the object values entered into the TAVC demonstrate that some artefacts do change in value and do reach a point in their histories when RU is reached. However, it is known that at the LMU phase some artefacts are discarded due to their limited value. Of the artefacts that make it beyond LMU it is probable that certain groups of object are more likely than others to receive conservation treatment or preservation effort. During the passage of time functional objects tend to become worn and works of art, grubby. In the first instance functional value is diminished and in the second, aesthetic virtue. At this juncture a distinction should be made between functional and "non"-functional objects. More effort is usually required to maintain the functional value of the former, since damage through use is an omnipresent risk. During its lifespan a functional object is therefore, more likely than a "non"-functional piece to experience loss in value and subsequent value gain, and so the cycle of the former will be cited here. Maintenance of the artefact, in terms of running repairs, might be attempted provided that the effort needed is regarded to be commensurate with the value of the object. With continued use a point in the objects life will probably be reached where the worn object reaches its nadir and repairs are not deemed to be justifiable. At this point in the history of the artefact it might be discarded or replaced, thus effectively becoming obsolete. Retention depends if the item possesses alternative and significant value attributions.

The speed at which the artefact approaches obsolescence (LMU) is dependent upon a number of factors pertaining to the ease of replacing the original artefact. Ready availability of raw materials with which to manufacture replacement items,

accessibility of capital to secure a replacement and advances in technology all contribute to loss in value in the original artefact.

The above elements help to explain why cars tend to approach obsolescence less rapidly than children's toys. Cars have a high starting value, thus justifying extensive maintenance before obsolescence is reached. What is more, the capital required to acquire a replacement car is often a prohibitive factor in abandoning the original vehicle. Toys, on the other hand tend to have a relatively low starting value and in the latter half of the twentieth century new varieties of toys were created in quick succession. The twentieth century also saw toys often characterised by novelty value, and so they are replaced, where capital permits, rather than repaired and retained.

Artefacts in the LMU phase might regain value, provided that they are not lost to the material record through destruction. With the further passage of time the artefact gains in antiquity and almost certainly rarity, as similar artefacts in the LMU phase decay. Provided that the attribution of antiquity and/or rarity instils the object with sufficient value, attempts might then be made to retard further deterioration, i.e. conservation work may be undertaken. In this way the artefact gains in value and rises from the LMU trough in its new incarnation as a commodity with reinvigorated utility.

Conclusions:

It has been demonstrated that value in artefacts can be derived from economic worth and utility. Utility is perhaps the more ubiquitous of the two elements, since without utility an object is worthless. The fact that utility cannot be measured in any accurate form should not detract from its use as a concept. It is not a difficult task, after all to identify whether or not an artefact possesses utility. Once utility has been established the task of explaining the retention of seemingly useless artefacts is facilitated. Utility can be expressed in numerous ways, which have been described above as value attribution. For example the utility or satisfaction derived from a car might predominantly be its functionality, or functional value. Other value attributions, however, might seem more abstract, such as the pleasure arrived at by observing a work of art. Even though awareness of utility is important, it cannot be interrogated in the quest to discover if and how the value of objects changes through time. For this

purpose measurable values are required, which necessitates a return to economic factors and price. By analysing the monetary values of cars and stamps over a period of time it was possible to demonstrate not only that the value of objects changes over time, but also that there is a discernible pattern of change. It has been hypothesised that preservation or conservation efforts are most likely to occur when artefacts enter the RU phase of their existence. It is thought to be unlikely that such efforts would be expended upon artefacts in the earlier LMU phase, since at this point the total utility of the objects is at its lowest and they are on the verge of disposal.

CHAPTER 3

Modern British Culture & Conservation Laboratory Culture

The Industrial Revolution did much to shape modern British culture, creating a predominantly urban society. There were numerous factors driving the change from rural to urban culture, such as the influence of naval merchants gathering bullion and valuables that could be used as capital to establish factories, which enabled the manufacture things from raw materials more efficiently and with greater economies of scale than had previously been possible. The efficiencies that were made possible through factories in turn came about as a result of mechanical innovations and the availability of coal on a large scale, which was a cheaper and more efficient fuel than wood. The innovations were borne of the Age of Enlightenment, with the progression of science and philosophy.

Preceding the Industrial Revolution, the social structure of Britain had been centred around the aristocracy (or elite) – including the church; and various strata of under-classes. With the inception of the Industrial Revolution, the balance of power shifted. The aristocracy still owned much land, but many farm workers were drawn into urban life. The mercantile class and entrepreneurs – the new middle class, wielded much of the wealth and power, and the poorer classes, by and large, stayed that way.

Poor sanitation and crowded housing in the cities, accompanied by poor working conditions and long hours, led to ill health and outbreaks of disease, such as diphtheria, tuberculosis and cholera, of which there were epidemics between 1831 and 1855 (Tarlow, 2007 : 187)). Victorian philanthropists recognised the need for social improvement and introduced workers' rights and educational reform, affording all children a basic education (Tarlow, ibid. : 31).

To support the needs of the urban population, a service industry of other businesses grew up around the factories, introducing a middle class into the equation. The consumption of luxury goods (as opposed to necessities) increased, as did the reliance on imports from other countries, and there was a period of Empire building, where

foreign nations received support, development and protection from Britain in return for resources and labour.

In the post-Victorian era, society was influenced by socialist welfare ideals and became more secular. Urban populations continued to expand, but there was greater movement away from city cultures for the middle classes – away from the smog.

The First World War put strain on Britain's resources, and created an imbalance in the population. A matter of years later, Britain was battered by the Second World War. With women taking jobs in munitions factories, offices, public transport and working the land, the trend of female employment continued after the war. The population was severely depleted and many immigrant workers from the Commonwealth and Europe entered the country to fill the gaps in employment. Britain became a multi-cultural and multi-faith society. Christianity was still the official religion, but many people were free to practise their own faiths.

Rationing, which had been introduced to make resources last longer during wartime, continued until 1951 and so consumption of luxury goods was limited. From this point the economy began to recover and individuals became more affluent. New technologies had been developed to aid the war effort, and were then adapted for use in civilian housing, furnishings and clothing.

The dynamic in industry began to shift, with the expansion of electronics and new communications companies. This led to a decline in agriculture and heavy industries. The service sector took over as the biggest employer of the population by the end of the 20th century.

Education is now more highly developed, with one third of eighteen year olds at university by 2005.

The evolution of a consumer-oriented culture, and the development of a global marketplace through the spread of new technologies and increasing economies of scale in mass production and transport, has led to goods being perceived increasingly as disposable, or readily and cheaply replaceable. This has meant that, whereas in the

past an item may have been repaired so as to retain its functionality, in more recent times such items are often now discarded and replaced or superseded by a new item.

British attitude to the past and material culture of the past

Since the Middle Ages Britain has displayed a strong class structure. The early dichotomy represented an upper class comprising an hereditary aristocracy, some semblance of a middle class, and a lower class (later, working class) that represented the majority of the population. The expansion of the middle class in terms of population and power occurred around the time of the Industrial Revolution, when merchants and entrepreneurs (industrialists) were able to amass personal fortunes. In a discussion of British attitudes to the past and material culture of the past, the most prominent behavioural patterns are displayed by the upper and middle classes, who wielded the greatest control over material culture.

To the aristocracy, or upper class, the past is a construct of enormous value, because their elevated status and privilege is predicated on hereditary birthright; and as history and genealogy can be employed to attest to their pedigree, the past could be argued to hold the key to their present status. Artefacts from the past, especially family heirlooms, reinforce status because they can function as authenticators of history, thus imbuing them with high cultural value. Heirlooms were artefacts that could possess multiple value attributions, which would add to their cumulative value. Artefacts that became heirlooms were often commissioned as display pieces, such as ornate furniture or personal portraiture. Such artefacts would often possess aesthetic appeal, but this could be considered secondary to their cultural value as status indicators.

Foreign artefacts or antiques gathered, especially in the 18th and early 19th Centuries, on Grand Tours could also confer intellectual status to the aristocracy (Bertucci, 2006 : 194). These artefacts were gathered to demonstrate the collector's 'taste' and knowledge of classical history and learning, which were admired in contemporary society. Such artefacts, whilst possessing aesthetic appeal, would have been high in cultural value, and it could be postulated that they conferred a form of intellectual pedigree upon the traveller.

The middle class had a view of the past that diverged from that of the aristocracy. Unlike the aristocracy, the middle class were not born into privilege, but earned their wealth. This means that the past is a tool less easily manipulated by the middle class to define status. However, that is not to suggest that such machinations could not be achieved. The middle class learned that wealth did not lead to social acceptance amongst the upper class, and this encouraged the middle class to improve their standing through education. Knowledge of history could demonstrate education, understanding and intellectual worth, and so this is ostensibly how the past was of value to the middle class.

As the middle class emerged, families would have possessed relatively few heirlooms, since they were working their way from humbler origins and a concomitant paucity of material possessions. Without the benefit of culturally valuable heirlooms, there was a compulsion to buy new luxury goods in order to display their new wealth and power.

A heavy reliance on new goods began to have a distorting effect on how objects from the past were perceived. For example, the Evetts family from Warwickshire were a nascent middle class family of yeomen farmers and bailiffs, who inhabited the Old Hall at Balsall from 1660 to the 1730s, when the family moved to the newly built Temple House. Around this time, three generations of heirlooms, which probably retained functional value, suddenly lost their remaining value to the family. An analysis of the assemblage revealed that there was little evidence of 'fashionable' white stoneware, leading to a conclusion that the discarded wares were considered to be outmoded, and so no longer of value as items of status display (Johnson, 1996 : 182). Several of the discarded plates had been pierced and Johnson surmised that this would have been in order to hang them from the wall as ornaments (ibid.). Therefore some of the artefacts had undergone different value assignments before their eventual disposal.

It is likely that the decision to dispense with the old artefacts coincided with the increasing popularity and availability of mould-made white porcelain sets, to which the middle classes of the 18th Century would have aspired. The apparent refinement

afforded by matching tableware would indicate affluence more overtly than mismatched pieces collected over the decades. The old had been rendered obsolete by the cultural value of the new.

During the First and Second World Wars in the first half of the 20th Century, social attitudes towards the past and its material culture were modified. Notions of improvement were not important when a nation's survival was at stake, and class distinctions were at least temporarily immaterial. The consumerism of the middle class was suspended and the public were compelled to make the best of their existing possessions, because precious resources could not be diverted to the production of fripperies. Notions of the past were temporarily put aside for concerns of the present.

By contrast, treatment of material culture of the past, especially residing in national museums and galleries, was given serious consideration. These collections were unique and irreplaceable preserves of cultural, aesthetic, educational and financial value. Since the collections were of such great importance and value and were being held in trust for the nation, it was crucial that they were protected from damage, so far as possible. In the First World War the British Museum, for instance, took precautionary steps to protect its most valuable artefacts. Caygill (1992 : 48) states, "Shortly after the outbreak of war in 1914 a large number of the more portable objects of special value were removed to greater safety in safes or strong rooms and their places taken by facsimiles or objects of lesser value... The Assyrian bulls, the larger Egyptian sculptures and the metopes of the Parthenon were too heavy to move and were protected in situ by sandbags."

By the Second World War, a number of temporary stores had been identified where the nation's collections could be placed in relative safety. These included country homes and castles, and a large quarry in Manod in Wales. The National Gallery identified criteria necessary for the stores - "The pictures would have to be carried, so a minimum number of steps was essential: doorways had to be high enough to accommodate the largest paintings, and the rooms needed to be fireproof, of adequate size and with the right level of humidity." (Bosman, 2008). Measures needed to be taken to address problems that arose from the fact that the artefacts were not being kept in specifically designed museums. "At Crosswood [a country house in

Aberystwyth], where 70 paintings were stored, the hot-water pipes of the antiquated heating system ran under the floor of the library, where the pictures were kept, seriously lowering the relative humidity, with potentially disastrous consequences for paintings on panel and canvas. As the heating could not be turned off without affecting the rest of the house, blankets and felt had to be soaked in a nearby stream and hung in the library until the humidity reached acceptable levels." (Bosman, ibid.)

In the Manod quarry store, "To create controlled conditions and protect the collection from the slate dust, freestanding brick buildings were erected in the underground chambers of the quarry. Narrow-gauge railway tracks were laid to facilitate the transport of works from one location to another within the quarry, and special wagons, to protect the works from variations of temperature and humidity during their transport, were built to the gallery's designs" (Bosman, ibid.).

In wartime Britain the treatment of personal possessions did not always resemble that of the national collections, since this became the material culture that would serve people throughout the wars. It was vital that functional objects retained their functional value, and so home repair of artefacts became a common occurrence. In the family home at this time, the value of objects was determined by their ability to facilitate the survival of that unit. A consequence of this new dynamic was that wooden features, such as friezes in period houses, were sometimes torn down and used as fuel (Hutchinson, 2003). The original features of a home now had less cultural value than functional value, and in terms of cost benefit analysis, the survival of the family was chosen over the survival of decorative historic features.

After the Second World War it became apparent that attitudes towards material culture from the past were shifting again, and that there was still a divide between the publicly and privately owned 'past'. Many goods were still being rationed until 1954, obliging families to continue to 'make do and mend', while the economy of the country started its process of recovery.

The post-war government under Clement Attlee wanted to give the British public a boost, to lift their spirits and direct their minds to a vision of an optimistic future (Childs, 1997 : 47). To celebrate the public's freedom from (most) rationing, the

1951 Festival of Britain was organised to showcase some of the new and modern furniture and appliances the public could buy, to replace their old and damaged possessions.

It seemed that those wealthy enough to embrace this opportunity did so with enthusiasm. Heirloom furniture became a casualty of the brave new world, with many families discarding old or antique furniture to make way for the new exciting furniture and the promises it brought of a bright future. The disposal of heirlooms in this manner demonstrated that the cumulative value of the artefacts (often comprising cultural, personal and even financial elements) was considered to be very low by their owners at that point in time.

The upper class did not adopt the same 'lifestyle' replacement policy as the middle class, because their antiques and heirlooms still retained their cultural value of authenticating their social position. However, in order to continue to afford the running of their estates, some families elected to sell a selection of antiques to raise funds.

The growth of the antiques market meant that more people than ever had the opportunity and the means to purchase their own bit of history. Expressing an interest in history would suggest education and intellect and recognising the cultural value of an artefact would imply taste and refinement – all qualities sought by the middle class (Tarlow : 2007).

Television producers exploited this resurgence of interest in antiques, commissioning programmes such as 'Going for a Song', where the public could bring their heirlooms and antiques before experts, who would supply some details of historical context and provide a financial valuation. This added a further dimension to the overall value of antiques, since rarity, craftsmanship and provenance all meant that the potential for a high monetary valuation. This excited the public imagination, since they were discovering that old things did not always diminish in financial value, but could potentially appreciate instead. This turned objects that were previously considered only to be social signifiers into objects that were social signifiers with cultural value and financial value – in other words, investments.

The public's interest in antiques was reflected in an increase in visitor numbers at museums, galleries and historic houses. National Trust membership also increased in the 1950s and 1960s (Fedden, 1974 : 153). The motivations for these were many and various, ranging from entertainment to education and curiosity about the peoples of the past and how they had lived. What mattered most was that the British people were taking interest in the artefacts and historic documents that had been set aside for their benefit and the amelioration of their lives, in whatever form that might take.

Treatment of artefacts

Functional and non-heirloom artefacts tend to be curated and repaired by the owner of the object. There are many products available on the market to facilitate artefact care. For example, there are detergents for cleaning clothes that can come with optical brighteners, enzymes to diminish stains, and fabric softener to improve garment texture. The proprietary formulas and easy application mean that very little knowledge is required by the user in order to produce good results. Car shampoos follow a similar logic.

When objects are broken there is often no need for the public to approach a specialist, since there is a range of adhesives available – one to suit almost any purpose. There are epoxy resins for strong joins; superglues (cyano acrylates) for quick-bonding joins; wood and rubber adhesives and a plethora of acrylics that perform multiple tasks. The demand for such choice arose in the early 1960s, when many building contractors were still employed in post-war home building. The lack of availability of professionals compelled the public to engage in 'do-it-yourself' (Hutchinson : 2003).

There are, however, instances when the public might seek specialist assistance. Car maintenance is one example, although some people have developed the confidence to undertake certain repairs themselves. Damaged watches and jewellery would be taken to a jeweller for repair, and shoes to a cobbler.

General curation of heirlooms and antiques can be undertaken by the owner, but damaged items are more likely to be referred to a specialist. Although these objects could be dealt with by conservators, there is a greater chance that people will approach restorers. This is because the pristine appearance of the object and its aesthetic value are often valued more highly than signs of age and damage (its historical integrity). This being the case, restorers are the ideal group to undertake the work, since they specialise in aesthetic conservation.

Conservation laboratory culture

This professional sub-culture was shaped from the same events that moulded modern British culture. However, with knowledge at the core of its belief system, it developed in parallel with the rest of society. History is peppered with early examples of material culture care, such as cleaning and repair. These demonstrate an interest in preserving aesthetic or functional value, through the removal of visually occluding dirt or returning a damaged item to functionality. However, these do not constitute 'conservation' in the modern sense, because in the past the application of treatment is not accompanied by the full "awareness" of the consequences of the actions – an awareness that transcends the recognition that the action produces a desirable result.

For example, Pliny discusses the restoration of monuments and ancient objects in the 1st Century AD (Pliny the Elder XXXV). There are numerous instances of metal rivet or dowel repairs to rejoin broken Roman and Greek ceramics (Koob : 1998). Predating these periods there is evidence of ceramic repairs, employing early adhesive in the form of bitumen, dating back to 7000 BC (Williams : 1988).

Notwithstanding semantic distinctions between what does and does not constitute conservation, it is clear that early civilisations possessed an understanding of the "working properties and deterioration behaviour of [some] materials" (Pye : 2001, 41), thus affording informed decisions when undertaking material culture care.

Yet by the Renaissance this understanding did not seem to extend to metallic corrosion processes. Cellini, writing on Renaissance Italy, notes rudimentary

conservation attempts made on classical bronze statues, through the removal of dirt and corrosion products (Sease : 1996, Cellini : 1878). These actions might have enhanced the appearance of the artefacts temporarily, but Cormans (1969) observed that this "aesthetic surgery" seemed to precipitate further corrosion. The putative aim of the intervention was to enhance the aesthetic value of the statues, but the unexpected consequence of renewed corrosion further impaired the aesthetic value.

By the 17th century the Age of Reason, which immediately preceded the Enlightenment, was producing luminaries, such as Linnaeus, who changed approaches to contemporary thinking with his classification of species. Through logic and empiricism, Linnaeus applied typologies to animal and plant species, asserting order on our understanding of the natural world and creating a template for the exploration of evolution.

Linnaeus's work was facilitated by access to large collections of ecofacts, or natural specimens. Such collections would have formed the basis for "wunderkammer" or "cabinets of curiosity" which were seen as early as the 16th Century, and which gained in popularity in the 18th century, perhaps due to the novel system of ordering the world. Wunderkammer comprised assemblages of both ecofacts and artefacts. These collections were amassed by the wealthy echelons of society – nobility, clergy and merchants – who were able to embark upon foreign travels, and to acquire exotic "wonders". The cabinets would not have been subject to Linnaean order. Rather, "objects were frequently classified and understood according to the ingenuity of their manufacture (and hence that of their makers), or their unusual materials, and not necessarily according to their inherent foreignness" (Turpin : 2006, 63). As such, different classes of objects tended to be juxtaposed, with their organisation more closely associated with visual impact than categorization (Pye : 2001, 13).

By the 18th century it was not only perceptions of natural order, but also social order that was changing. The Age of Enlightenment advocated rationality as a means of establishing tenable systems of ethics, aesthetics and knowledge, and challenged superstition and doubt (Kors : 2003). Empirical philosophy encouraged the development of political and economic thought and the progress of the natural sciences – biology, chemistry and physics. Travel facilitated communication between

nations with different intellectual traditions, the discovery of which benefited philosophy and science. Newton famously applied algebraic thinking – a product of the Islamic world – to geometry, the Western mathematical tradition and from the fusion synthesised calculus, an invaluable tool in the application of scientific problems. Newton combined mathematics of axiomatic proof with the mechanics of physical observation to devise a coherent system of verifiable predictions (Brown : 2002).

The 18th century heralded an era of rapid change. The industrial revolution in Britain was on the horizon, a phenomenon made possible by the capital accrued by merchant seamen and mechanical innovation inspired by scientific knowledge. The new capitalist dawn ushered in a new elite of the entrepreneur, which marked a decline in the previously unimpeachable power of royalty, the aristocracy and the Church. A consequence of the shifting power dynamic was the dispersal of some of the large collections amassed by the traditional elite and their re-housing in the emergent national museums, such as the British Museum, which opened its doors to the public in 1759.

The coincidence of the nationalisation of collections with the Age of Enlightenment meant that it was possible for the first time for scientists to be employed to consider the preservation of artefacts and to determine the causes of deterioration.

While conservation science was in its embryonic stages, the craftsman cleaner / restorer was working in tandem at museums. The scientists could undertake experiments to determine what treatments could preserve or restore specific material types and the craftsmen, with specialised artefact skills could act as technicians to apply the interventions (Watkins, 1997). It was not uncommon for artisans to work in this capacity during the Renaissance – the difference being that the restorations could now be supported by scientific knowledge. In the British Museum during the 1920s and 1930s, Scott and Plenderleith paved the way for the scientific conservation of antiquities in Britain. Improved communications in the 19th and 20th centuries meant that the scientists were able to keep abreast of the latest scientific developments and build on the earlier seminal work of Freidrich Rathgen in Berlin and Gustav Rosenburg in Copenhagen. Rathgen not only devised many conservation treatments,

having determined the nature of decay in artefacts and tailoring the intervention, but he also monitored the objects, which led to the development of comprehensive conservation records. Rosenburg had initially trained as a sculptor, but taught himself sufficient science to be able to establish the conservation laboratories of the Danish National Museum (Caple : 2000).

The complimentary assets of craft skill and scientific knowledge when fused created the blueprint for the professional conservator. Until the 1950s the British Museum ran a multi-lateral conservation / restoration operation, with scientists employed in the Research Laboratory and craftsmen restorers, recruited before the Second World War, based in the curatorial departments. By the late 1950s, however, there was a full time conservation course established at London University's Institute of Archaeology, enabling conservation / restoration staff to undertake a unifying qualification.

As conservation was being established as a university-based qualification in Britain, the discipline in the Western world was beginning to demonstrate its credentials as a nascent profession, with the inception of the first international conservation organisation. In 1950 the global conservation community was able to unveil to the world the International Institute for Conservation of Historic Objects of Works Art – the IIC. By 1952 the IIC were ready to publish the first dedicated conservation journal, "Studies in Conservation". By 1953 Britain launched its own sister organisation, the United Kingdom Institute for Conservation, which was kept company by the other regional off-shoots that had sprung up from the IIC. UNESCO founded ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) in 1959, which joined ICOM (International Council of Museums) in their endeavour to develop international standards in the care of cultural property and the provision of a forum for the exchange of ideas on best practice (Caple, 2000 : 55).

This potted history of British conservation provides some insight into the development of conservation science and its professional application, but it does not explain the evolution of the ethics and philosophy that by necessity accompany the profession. Conservation has always been intimately associated with the

Enlightenment ideal of knowledge – a legacy that has been reflected in conservation science and the development of treatments devised in response to decay patterns, and the keeping of records. However, the burden of knowledge in conservation extends beyond the measured application of interventive treatments and awareness even of preventative measures. What it also encompasses is the need to show awareness of the context of an artefact and its "true nature" (Caple : 2000). Information falling into these latter categories is crucial if culturally sensitive treatments are to be applied. Awareness of the importance of this information came around at the time that William Morris co-founded SPAB (The Society for the Protection of Ancient Buildings) in the 19th century. Morris was appalled to discover the treatment of certain churches and monuments when undergoing supposed restoration. The churches were arbitrarily stripped of elements considered to be out of keeping with the Gothic ideal to which the restorers aspired, imagining this to be an appropriate interpretation of the original architect's vision. What tended to result was instead a novel fantasy that spoke more of Victorian ideal than of ancient architectural reality (Jokilehto : 1999). Morris considered this behaviour to be unethical, since the restorations did not reflect what could have existed at any stage of the buildings' history and did not show any respect for the validity of subsequent building phases. Ultimately Morris's objection was that architectural restoration tended to be "untruthful". SPAB had a profound impact upon the evolution of conservation since it supplied a theoretical and ethical dimension, and with it the responsibility of the conservator to act accordingly.

Meanwhile, in France, a Gothic-revival trend was in evidence, since there were still many extant Gothic buildings, the reconstruction of which were considered tantamount to national duty (Muños-Viñas : 2005, 4). The architect Viollet-le-Duc was responsible for the repair of Notre Dame de Paris and other significant projects. Viollet-le-Duc possessed an almost diametrically opposed view of architectural restoration to that of Ruskin. He believed that a building should be restored to a 'pristine' condition, as long as this was consistent with the original architect's vision – the true nature of the building. The difficulty was that this true state might not even have been realised by the architect. Viollet-le-Duc argued that damage detracted from the original state of the object and that it was the duty of the conservator to efface the ravages of time (Muños-Viñas : 2005, 5).

Ruskin and Viollet-le-Duc, therefore succeeded in polarising conservation theory, the former with his restrictive view and the latter with his permissive view. However, both men were concerned with protesting the truth of the object in question, although one emphasised the historic truth and the other, the aesthetic truth. Therefore, whichever way it was perceived, conservation began to develop as a 'truth-enforcement' operation (Muños-Viñas : 2005). As conservation theory developed, the notion of maintaining an object's true nature or identity gathered force. Yet again there was no consensus of what this comprised in the conservation community. The two founding theorists supplied classical theory with 'historical' and 'aesthetic' integrity, which was further supplemented by the notion of 'physical' integrity, referring to the original material component of an object, which ought not to be altered (Clavir : 2002). In fact, there could be considered multiple truths of an artefact, which meant that conservation would have to seek the right balance of treatment in order to preserve 'true nature'.

Since the simultaneous preservation of aesthetic and historical integrity was difficult to achieve, due to the fundamental conflict of the aims, conservation divided into two schools – one pertaining to aestheticist theories, emphasising aesthetic integrity and favoured by Mediterranean and Latin countries; and scientific conservation, emphasising historical and physical integrity and favoured by Anglo-Saxon countries (Muños-Viñas :2005). By the second half of the 20th Century, scientific conservation began to emerge as the more prominent school and was further ratified by ICOM (1984), that stated an intervention on an historic or artistic object must follow the sequence common to all scientific methodology :

- Investigation of source;
- Analysis;
- Interpretation; and
- Synthesis.

Only then can the completed treatment preserve the physical integrity of the object, and make its significance accessible. Most importantly, this approach enhances our

ability to decipher the object's scientific message and thereby contribute to new knowledge.

Modern conservation became about emphasising the preservation of the informational (educational) value of artefacts, which could be achieved, or so it was believed, through the application of scientific techniques. The development of radio carbon dating (RCD) did much to boost this belief, since previous dating methods were reliant upon artefact typologies and the investigation of historic context. The advent of RCD supplied considerably more precise results, thus adding to the informational value of artefactual document.

Investigative and analytical techniques, such as the use of scanning electron microscopy, x-raying and x-ray fluorescence each contributed to what information could be revealed from an artefact, improving knowledge of deterioration, condition and composition. Armed with this information, conservators could devise appropriate treatments to slow deterioration in artefacts, thus preserving their physical integrity.

Since it was believed that science could both reveal and preserve the integrity of artefacts, it had a strong influence over the manner in which artefacts could be treated. According to conservation ethics, it was unethical to damage the integrity of an artefact. This in itself did not seem unreasonable, since the medical profession's Hypocratic Oath ensures that doctors do not prescribe harmful treatments to patients. However, in the case of conservation, the code encouraged cautious behaviour in conservators, since history revealed that some early 19th Century treatments had caused damage to objects over time, and efforts should be made to ensure that new treatments do not cause deleterious consequences. On the one hand, this had a positive outcome, because it encouraged the development of materials science and materials testing, in order to discover which reagents, chemicals and consolidents could be applied with impunity. On the other hand, it caused the development of the 'minimum intervention' (Pye : 2001) approach, whereby conservators should apply the lowest impact treatment possible, whilst still preserving the physical integrity of an artefact. At face value this might not seem problematic, since it meant that if at a future point an ideal treatment was devised or scientific investigation techniques

became more refined, new treatment and investigation would not be precluded by the old.

This faith in science to deliver the answers meant that experimental treatments or very interventive or irreversible treatments were almost considered to be unethical. Yet there were some circumstances when an object's survival depended upon more radical treatment, and minimum intervention would only supply a short term solution. However, as the 20th Century progressed, ethical codes were revised to permit the conservator to use their judgement to apply what they considered to be the most appropriate treatment.

Conservation was strongly linked with museums, since many conservation departments grew up out of the need to treat archaeological material that required conservation intervention upon excavation in order to retard deterioration. Beyond this, there were existing collections of cultural property that needed care and treatment. Museums also shared similar aims with conservators, since their collections were supposed to be held in trust for the nation, so needed to be preserved. Having experienced early conservation treatments go wrong, conservators were keen to find treatments that would age favourably, lasting as long as possible, in order that the object would require less interventive treatment in the future. However, with the museums' obligation to hold material in trust for an indefinite period of time, conservators were more or less compelled to look at attempting to make artefacts last in perpetuity.

Partly in recognition of this aim, and to be consistent with ICOM's mandate, the keeping of conservation records became an important practice. The records served a number of purposes. In recognition that artefacts might require future treatment (given that their future was supposed to be long), records of treatment methods and chemical interventions would help lead future conservators to appropriate treatments, in light of what had gone before. Descriptions of object condition would also help museum staff to establish if an object state had altered over time. Records were also invaluable for the preservation of the information revealed about an object through analysis and investigation, that revealed truths about the artefact and contributed

towards the informational value of an object, provided context for the item, and even contributed to the object's truth (Corfield : 1992).

In modern conservation practice, the ideal route to preservation is to prevent the occurrence of deterioration in artefacts, to reduce the need for the implementation of interventive measures. Such preservation can be achieved through the application of environmental controls, which involves the regulation of three main factors – temperature, relative humidity and light (ultraviolet and visible). Artefacts of different material types are suited to specific types of environment. For example, iron objects corrode readily in the presence of moisture, and so a controlled environment of less than 15% relative humidity (RH) is recommended. Copper is capable of tolerating a higher RH before experiencing corrosion, but is often kept in conditions below 15% RH. Organic materials, by contract, require higher RH parameters, often between 50 and 65%, since if the humidity is too low, materials might shrink or crack, and if RH is too high, fungal, bacterial and pest attack might manifest. Organic objects and paintings are affected by light to a greater extent than inorganic objects. Shortwave ultraviolet light is the most damaging to objects, since it can promote chain scissioning processes within the materials, damaging their integrity and potentially causing flaking, cracking and fading. For these reasons efforts are made to eliminate the presence of UV light by housing sensitive objects away from windows or applying a UV-blocking film or blinds to nearby windows. Even visible light can have a cumulative effect on sensitive material, causing fading. The solution in this instance is to apply an upper limit on the amount of light falling on these objects over a fixed time (Thomson : 1986). Environmental controls are particularly valuable in museums and galleries, where there are large numbers of artefacts on display and in storage, since it would be nearly impossible, due to the prohibitive time and expense, to provide interventive treatments to every item in a collection.

Conservators are by nature protective of the physical integrity and informational value of artefacts, but this can cause conflict with the public, who want access to the collections that have been preserved for their benefit, so they can appreciate the cultural value that also resides in the same artefacts. Conservators are concerned that overuse will cause deterioration and subsequent loss of value, hence expressing a desire to restrict access. However, the public are entitled to convert the cultural

capital of the collections into cultural value through use. This could lead to the postulation that conservation, from the point of view of some professionals, is more for the benefit of the objects than the public. This is of course a balance that must be addressed.

Survey Results for Conservation Laboratory Culture

See Appendix 6 for definitions of the categories used in the charts.

Conservation Laboratory Culture represents modern Western Laboratory Culture from the second half of the twentieth century. **Figure 3:1** below sets out the different cultural groups from which has come the material culture conserved by Conservation Laboratory Culture. Nine of the artefacts were not assigned to a specific group, because there was too little information available to select a category with confidence. The source material for eight of these artefacts was laboratory records in which the author did not ascribe a provenance and there was insufficient evidence to extrapolate a cultural assignment. The nine items represent only 1.5 % of the set, and so should not disrupt the interpretation of the majority of the data.

Table 3:1 represents the conservation of artefacts from 33 named groups. Some of the groups are very specific, where clear information has been available, for example Post 17th century Chinese. In other instances the grouping is more generic, such as Chinese Culture, when there has been insufficient data to assign a date. It is possible, therefore, that there might be a small degree of overlap in some of the groups. When collecting the data I have tried to be as accurate as the evidence will allow, to place the information in a secure context. Of the 33 groups there is a considerable geographical and temporal spread, which is of significance, since it demonstrates that the conserving group has the opportunity to conserve artefacts that come from outside the group. Of all the remaining conserving groups to be discussed in this chapter there was no inter-group conservation, with the exception of Roman Culture, where a Greek statue is conserved.

One of the explanations for the wide range of cultural groups conserved by Conservation Laboratory Culture is the group's affiliation to museums and the collections therein. In Britain alone a picture can be painted of how collections of

foreign artefacts came to be collected, from fifteenth to sixteenth century merchants on voyages of discovery, to Gentlemen undertaking Grand Tours of Europe. Private collections of exotica often found their way, in time, into newly opened public museums, providing assemblages comprising artefacts from many continents that required care and attention.

Cultural groups conserved by Conservation Laboratory Culture					
Cultural Group	**Number of recorded conservation episodes**	**Cultural Group**	**Number of recorded conservation episodes**	**Cultural Group**	**Number of recorded conservation episodes**
Medieval	**232**	Middle Eastern	3	Medieval religious	1
Romano-British	**91**	Ancient Egyptian	**32**	Renaissance	4
Aborigine	1	Egyptian	1	Medieval secular	**16**
Maori	5	Near Eastern	**25**	Social History	**28**
Polynesian / Micronesian	1	Asian	3	European post-Medieval	**32**
South American	1	European Bronze Age	4	British Military	1
African (post C17th)	1	European Iron Age	1	European Country House	4
Ethnographic	1	Greek	4	C18th– C20th Religious	4
Chinese (post C17th)	17	Roman	4	C18th– C20th Modern (Western)	**28**
Chinese	3	Anglo-Saxon	5	Late C19th Western	8
Indian (post C17th)	2	Viking/ Anglo-Scandinavian	1	**UNASSIGNED**	**9**
Indian	1				

Figure 3:1 Table of cultural groups conserved by Conservation Laboratory Culture

Where large numbers of artefacts have been conserved from a particular group the number of objects has been highlighted. The instances of conservation of Medieval Culture (232 counts) and Romano-British (91) are great in comparison with other groups. This is a reflection of the bias of the data, since many of the records were based upon laboratory records and a high percentage of the artefacts were from British archaeological contexts. The Medieval bias is probably a function of late twentieth century Rescue excavations, undertaken to reveal and investigate archaeological sites in advance of building development. The foundations for many buildings would have been at the level of Medieval contexts, thus providing an explanation for the proliferation of this material. Stipulations were made by the British government that

the excavated material should be conserved, hence the place of Medieval Culture in this pattern of conservation. Romano-British material also displays a high incidence of conservation, because there are a large number of Roman centres spread throughout the United Kingdom.

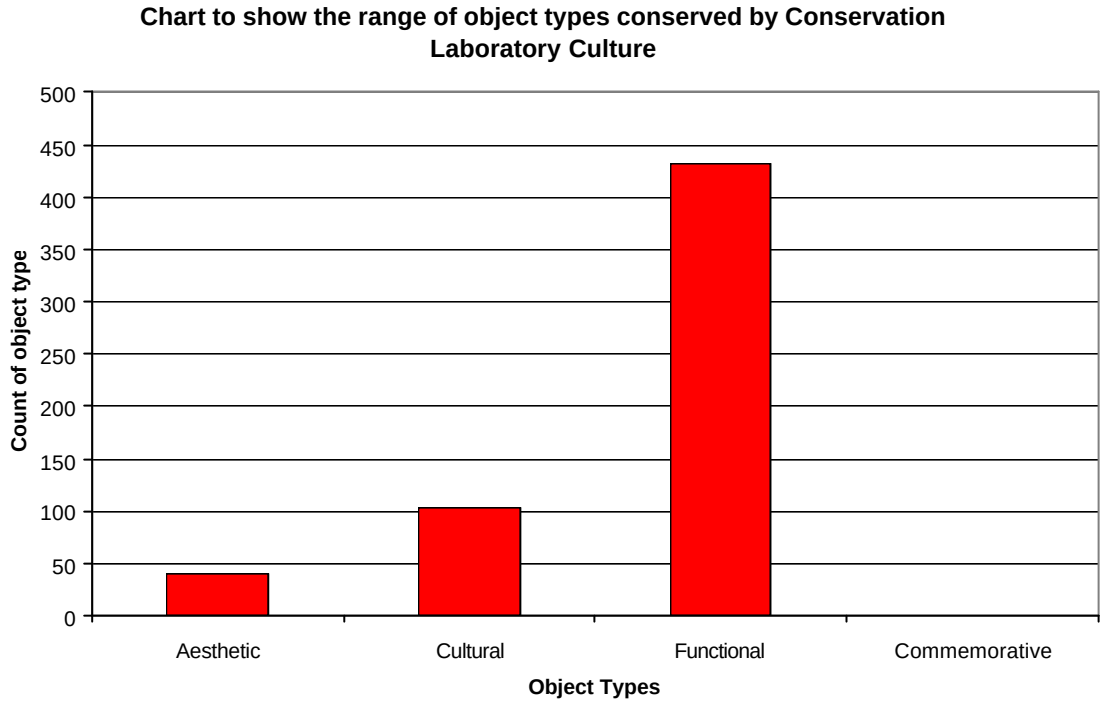


Figure 3:2

Having established the range of material culture conserved by Conservation Laboratory Culture, the motivations and methods of conservation employed by the group will be addressed. **Figure 3:2** is a chart that reveals the range of object types conserved by the group.

Chart 3:2 reveals that the majority of the items conserved were originally designed to be functional objects. The high number of functional artefacts is a reflection of the archaeological context of many the artefacts conserved by the group. Excavations tend to reveal a large volume of "functional" material from domestic contexts and middens. What is of interest here is that many once functional objects would have been discarded in middens because they were broken or damaged and had lost their

functional value. Over one hundred of the conserved artefacts were designated as cultural objects, and nearly fifty as aesthetic objects. By contrast to the functional artefacts, most of the objects from these two categories were from historic or museum contexts. It was hypothesised in the Value Chapter (Chapter 1) that artefacts are usually conserved if their perceived value is high, and yet here there is evidence for the conservation of seemingly low value, damaged, ex-functional material. To find an explanation for this apparent aberration the content of **Figure 3:3** should be viewed, which shows the range of reasons the conserved artefacts were preserved.

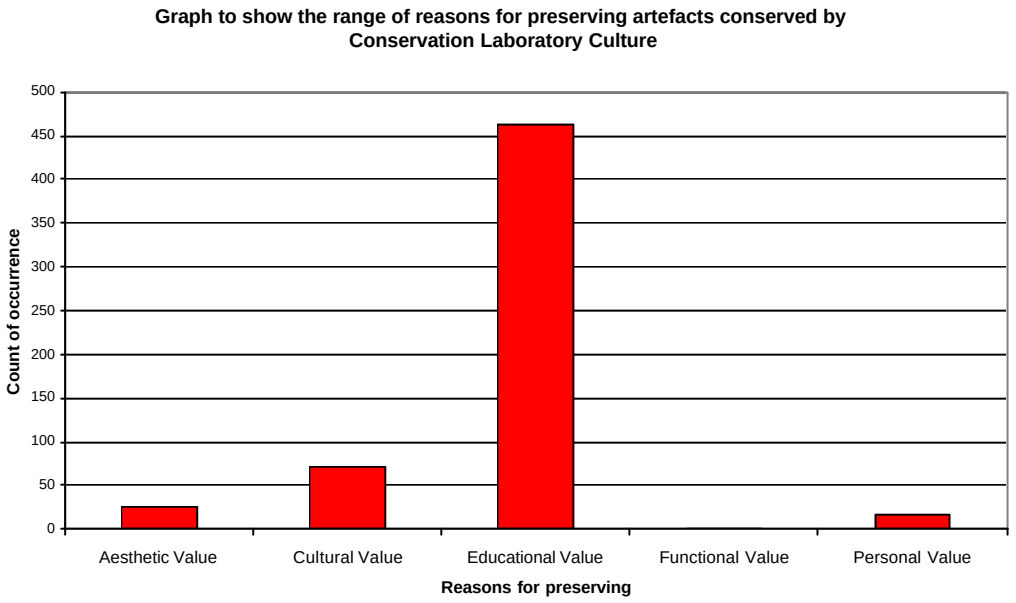


Figure 3:3

It can be seen that preservation due to functional value is negligible in this data set. The most prevalent reason for conservation action in this instance is the presence of educational value. This is evidence of value reattribution, since many of the once functional objects - mainly archaeological artefacts – have been imbued with educational value, since these have the potential to provide the archaeologist or researcher with contextual and possibly typological information. These objects have been transformed since excavation from low value, damaged objects to high value "educational" tools. There remains a portion of the artefacts that retain their aesthetic and cultural value, but the numbers are diminished from those in **Figure 3:2**. The subset of the cultural and aesthetic objects that were recovered from archaeological

contexts has joined the ranks of the artefacts possessing educational value. This has probably occurred because during the time that has elapsed between manufacture, burial and excavation, the artefacts have been distanced from their cultural contexts and have transformed in appearance. Yet not all of the functional objects were preserved for their educational value, since some gained personal value and others, cultural value. Those purported to possess personal value are functional items that have been repaired, but not necessarily returned to functionality. Those with newly apportioned cultural value are similar in many respects to those in the personal value category, for example riveted Roman Samian ware. The mended Samian ware has been postulated to have been kept on display, thus providing a cultural reference point that distinguishes it from personal value. It would seem that what separates these two categories is the amount of contextual information that can be revealed. What is true of all the artefacts is that they possessed sufficient value to merit conservation.

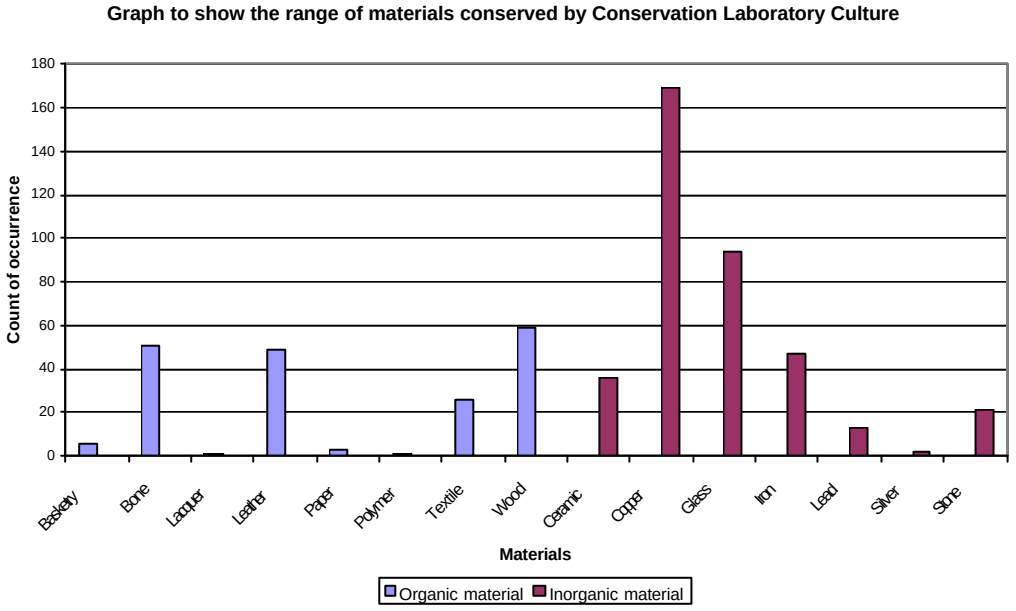


Figure 3:4

Figure 3:4 is a chart that displays the range of materials found in the artefacts conserved by Conservation Laboratory Culture. The large number of artefacts in the set and the variety of cultural groups supplying the objects combine to provide a wide range of materials in the composition of the data set. The primary source of the evidence – archaeology, via laboratory records – has influenced the prevalence of some materials and the paucity of others. Organic materials do not tend to survive well in burial contexts, unless the environment is waterlogged, of a favourable pH, anoxic or simply very dry. It is to be expected, therefore, that a significant volume of

organic-based artefacts will be destroyed during burial. When organic artefacts are excavated the material is usually selected for conservation, since it can supply valuable information about the material culture of a social group, thus adding contextual detail to the study of a site and its past inhabitants. The relative rarity, and subsequent preservation of excavated organic artefacts goes a long way to explaining the strong presence of artefacts comprising bone, leather, textile and wood. Had there been a higher ratio of historic objects in the data set the presence of organic materials would almost certainly have been stronger, with a greater presence of paper, polymer (e.g. plastics) and textile. The inorganic materials, by contrast to their organic counterparts, present higher survival rates during burial.

However, it should not be assumed that survival guarantees conservation. For example, historically a larger number of artefacts, many of them functional, would have been produced from iron than copper. Yet **Chart 3:4** clearly shows the conservation of a greater number of copper artefacts. There are several possible explanations for this occurrence. Iron, as implied above, tended to be used in the manufacture of functional goods, e.g. nails and tools, and so their value to archaeologists is relatively low. Copper was more expensive to produce, less plentiful and had a gold appearance when alloyed with tin or zinc. All of which meant that the metal was more frequently used for aesthetic or cultural articles, such as jewellery or statuettes. Additional factors that would ultimately influence conservation are iron's relatively poor survival in burial contexts and copper's better survival potential. In combination with its poor survival and relatively low post-burial value, iron artefacts are less likely to reach conservation than copper objects.

Ceramic artefacts tend to survive well in burial environments, with the exception of unfired, or low-fired wares. However there are reasons why archaeological ceramic objects do not make it to conservation. Ceramic fabrics have been used for millennia to make cooking and storage vessels, ostensibly functional artefacts. Such items were usually inexpensive to make and buy and were durable. Yet despite their durability ceramics are vulnerable to knocks and can be broken or damaged in this way. Once broken a ceramic vessel would usually be discarded (with the exception of certain Samian ware examples), since replacement was cheaper and more practical than attempted repair. As a result much archaeological ceramic ware is found in middens

and disposal contexts. Disposal in such a fashion means that sherds can be separated and further damaged, reducing the possibility of recovering all the fragments for possible reconstruction. Individual sherds may have typological value to a researcher, but are not likely to receive conservation treatment.

Figure 3:5 is a chart showing the range of deterioration states of the artefacts conserved by Conservation Laboratory Culture.

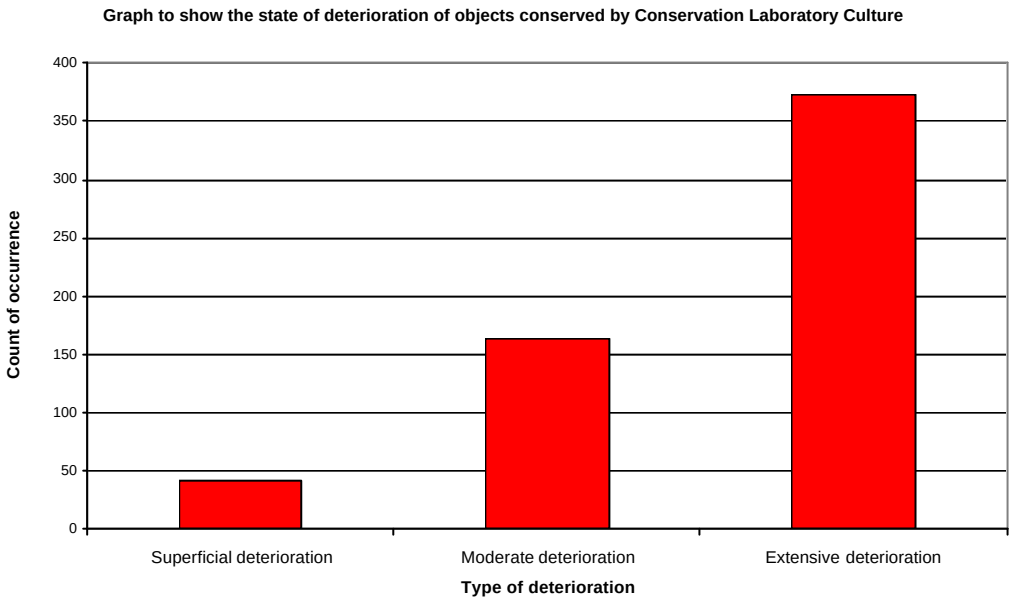


Figure 3:5

The superficial deterioration pertains to the historic objects represented in the set and the moderate and extensive deterioration relate to the archaeological artefacts. The combination of age and burial conditions ensure that many archaeological objects are in an advanced state of deterioration when they are conserved. Conservation measures are applied in spite of the condition, since the artefacts are considered to be sufficiently "valuable" at this point in their lives. What is more the conservator is privy to an array of remedial treatments that can halt or retard further deterioration, thus making the treatment worthwhile.

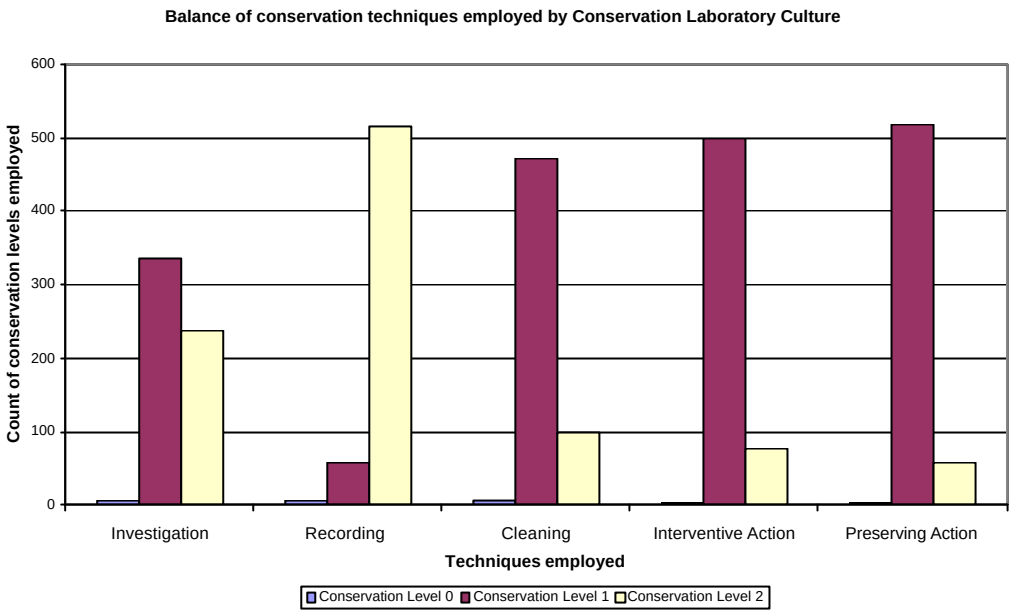


Figure 3:6

Figure 3:6 is a chart depicting the balance of conservation techniques undertaken by Conservation Laboratory Culture, showing at a glance the methodology applied.

Figure 3:6 shows that some degree of investigation routinely takes place and that recording tends to be in the form of extensive record making. Investigation to reveal the "truth" of the artefact and recording to preserve the information are considered to be important facets of modern conservation practice. The extent of cleaning undertaken also tends to reflect the need to reveal the truth of an artefact by rediscovering the original surface, for example. Consistent with the notion of truth is the level of interventive treatment, where stabilisation is emphasized. Stabilisation is again emphasised in the "preserving action" taken.

Charts were produced to show the balance of techniques applied to all objects of the set representing a specific value assignation (reason for conservation) and separately applied to each of the different materials. The results were very similarly matched to the chart in **Figure 3:6**, which would suggest that the selection of the methods is strongly influenced by cultural patterning.

Chapter summary

What is conserved :

A wide variety of artefacts from numerous cultural groups are conserved by Conservation Laboratory Culture. The diversity of objects is a result of the tendency for Conservation laboratory Culture to conserve museum artefacts. Museum objects in the West have often been gathered from foreign cultural groups. Archaeological artefacts are also well respected and this is a further group of objects that often receive conservation treatment.

Why have the objects been conserved?

Most of the artefacts have been conserved because they possess 'educational' value, or informational value as documents of research, to support the 'knowledge' belief system. These have been conserved for the benefit of researchers, academics and conservators. The remaining objects have been conserved for their cultural, aesthetic and personal values.

How have the objects been conserved?

Conservation Laboratory Culture conservation treatments display a high level of investigative work and researching, accompanied by limited cleaning and predominantly stabilising treatments.

The various forms that the TAV Curve can take are not culturally specific, and so can be viewed in the Conclusions chapter.

CHAPTER 4

Regimental Culture

Regimental Background

Regiment is derived from the Latin "regimen," which is a rule or a system of order. As early as 1558 French cavalry units were referred to as "régiments" and by the Thirty Years War (1618-1648) the Regiment had developed into a core organisational unit, with troops commanded by a colonel and divided into companies, squadrons or battalions - the battalion being the basic tactical unit. Yet it was the regiment – the parent unit – that became the principal instrument of garrison administration, responsible for: recruiting, training and centralizing wartime command. Loyalty, obedience and esprit within a regiment was promoted by imposing a hierarchical system and endowing each group with a distinctive name, number, uniform, insignia and Colours. These and the rituals that accompanied regimental life became the basis of regimental culture and tradition (http://147.71.201.21/adamag/regiments/history.htm). Although regiments enjoy a certain degree of autonomy they are ultimately sub-units of the Army, to which all soldiers owe their allegiance; and yet soldiers seem to identify most strongly with the regimental subculture. It is perhaps a crucial point that "regimental subculture… although overtly uniform, [is] subtly but deeply differentiated" (Strachan: 1975; 195) and it is the distinctions that foster the sense of belonging and identity that is usually referred to as "esprit de corps". To emphasise the depth of regimental camaraderie there is a witty definition of esprit de corps published in the weekly chronicle of the Durham Light Infantry (1896), proclaiming it to mean: "the art of abusing and finding fault with every regiment but your own" (Thursday 7th May, 1896 No. 95; p1067).

It would seem that the approach of nurturing and promoting regimental cohesiveness is sound strategic planning and, "Kegan has gone on to conclude that the regiment is the prime influence in explaining the army's political neutrality" (Strachan: 1975; 196). Kegan maintains that the stratagem operates in the following manner: "Through the regiments' mess, through its distinctive traditions, through its paternalism, the officer's loyalty is directed towards the lesser institution (the regiment), not the greater (the army). Rivalry and competition between regiments then internalises any inclination in the army's officer corps as a whole to act more cohesively. The focus

on dress distinctions, military bands and regimental customs diverts militarism in Britain into safe channels" (Ibid 196-197).

Maintenance of order:

From the very name of Regiment it could be inferred that a system of rules and regulations ought to be in place in order to allow for the organisation, training and deployment of the soldiers. Such rules were collated and codified in volumes known as the "Standing Orders", and have existed in a printed format since around 1831. However before this date Standing Orders would have been written by hand and the regulations developed by each regiment. The Orders were often modified over time and new regiments frequently adapted the Standing Orders of established groups, since the requirements and expectations of units would have been similar. The preface to a 1941 publication of the Standing Orders of The Durham Light Infantry encapsulates the purpose of the rules:

"The Standing Orders of The Durham Light Infantry, recently revised with the concurrence of both battalions, have been framed with a view to assisting all ranks to maintain the honour of the Regiment and its high efficiency in peace and war which has ever been its attribute. Efficiency depends on discipline, and there can be no discipline without obedience. As Colonel of the Regiment, I hereby direct that all ranks should make themselves acquainted with these orders and obey them" (General Beauvoir De Lisle: 1933).

Ranks and responsibilities towards material culture:

Regiments comprised soldiers and officers and for these men to live and train as a unit a disciplined routine was required. The Standing Orders for the 106th Light Infantry, compiled by Lieutenant-Colonel R.R. Gillespie in 1876 contains a personnel section that details the duties of men and officers of the various ranks. It soon becomes apparent that there are responsibilities regarding not merely the physical welfare of the men, but also the care and maintenance of uniform and equipment. Weapons especially were vital for the protection of the soldiers and their honour, and so it follows that regular cleaning and repair needed to feature in the diurnal routine of the soldier. Although the life preserving nature of the uniform was usually secondary to that of the weapons, its fit and state of repair could greatly affect the comfort, and in

turn, the endurance of a soldier, and so demanded a strict degree of regulation. The import of attention to material detail is encapsulated in the following statement from the Standing Orders: "Besides giving the appearance of smartness and uniformity, well fitting equipment materially lessons the irksomeness of its weight, a matter of no small importance to infantry soldiers, both as regards his health and his power of endurance" (Ibid: 1876; 153, para 566). The physical uniformity for which the soldiers would strive contributed to development in their discipline and precision, since effort and attention was required in preparation of uniform and equipment for kit inspection or parade. Beyond plain appearance it is stressed that well fitting dress and equipment enhanced the well-being of the soldier, which in turn impacted upon the soldier's performance, the crucial nature of which was well understood by the army.

Officers and other ranks were appointed specific duties pertaining to the distribution, care and repair of uniforms, equipment and accoutrements. Amongst the responsibilities of the Quartermaster, for example, is the provision of clothing and equipment. "The Quartermaster-Sergeant, and all the regimental tradesmen, with their work and workshops… are under his direction" (Gillespie: 1876; 20, para 89). It is apparent that the Quartermaster is responsible for ensuring the cleanliness of the fabric and accoutrements of the barracks and organising the parties of soldiers to undertake the necessary tasks. This position covered many of the material concerns, but there were additional ranks that helped to ensure the thorough inspection and maintenance of equipment. The Armourer-Sergeant, under the immediate superintendence of the Quartermaster, had to "keep the rifle of the regiment in serviceable order, and… examine each rifle separately once every three months" (Gillespie: 1876; 28, para 131-2). The Armourer-Sergeant was not permitted to undertake any work for a soldier without a written order signed by the captain or pay-sergeant (Ibid: para 135). Every Monday the A-S was required to "furnish the Quartermaster with return of work done the previous week" and this would have been recorded on what was then referred to as Regimental Form 13. The Bugle-Major had to "inspect the bugles and drums daily, and report to the adjutant for commanding officer's information when any of them have been ill-used or require repair" (Gillespie: 1876; 30, para 144).

Cleaning and Maintenance

In the nineteenth century barrack accommodation at home was extremely cramped and this combined with a limited diet and meagre sanitary arrangements meant that there was a greater likelihood of dying of an infectious disease than there was of being killed in action (Thompson). These were compelling reasons for ensuring that the barracks and the men were kept as clean as provisions would allow. Cleaning the fabric of the barracks was, therefore, an important part of a soldier's routine, as was the cleaning and polishing of uniform and equipment. As part of a systematic attempt to keep disease at bay the value of cleaning could be acknowledged. However, the routine of cleaning served a number of purposes. It instilled discipline and awareness, since some metals used in buttons and other fitting required regular polishing to remove corrosion tarnish. The act of cleaning also occupied the time of the soldier and in peacetime this was a boon, since it served to allay boredom, which left unchecked invariably led to drunkenness or crime.

The care of weaponry and accoutrements through cleaning and maintenance is clearly set out in the Standing Orders, with the following being an example: "Captains are answerable that their colour-sergeants always have a supply of Rangoon oil [petroleum] for the cleaning of arms, and an oil can of regimental pattern" (Gillespie: 1876; 154, 568). "Every soldier should be able to obtain oil when he requires it, and always carry a dry oiled rag in his pouch" (Ibid: 154, 569). The purpose of having access to the oil was to lubricate the mechanism of the guns, at the same time adding a coating to the surface of the metal, thus retarding corrosion. Not only do the instructions illustrate an awareness of the importance of maintaining equipment, but they also ensure that the action is carried out, by embedding the responsibility in the chain of command. The Captain is charged with providing a supply of oil for the men, thus looking after the men and the men are told to look after themselves. In a similar vein there is a suggestion in the Officer's Troop Book of the 19th Hussars that the "bits, stirrups, and bright buckles [of the tack] may be rubbed over with an oil rag to prevent rust" (1884: 37). This overtly states the purpose of the instruction, whilst demonstrating an awareness of the materials employed in the artefacts and their potential deterioration.

As time progresses through Regimental culture instructions for the maintenance of equipment is added to dedicated training manuals. The essential nature of maintenance and its appearance in twentieth century Regimental life is reflected in an Artillery Training pamphlet of the 1950s concerning field range artillery. The maintenance routine for artillery is designated as: "At least one hour each day must be devoted to gun maintenance, guns being brought out of action for the purpose. In rest periods, full technical inspections must be carried out, and any outstanding repairs or modifications executed" (War Office: 1950; 82, section 44, para 400). The importance of adhesion to strict maintenance plans was appreciated from early in Regimental history, since it was well understood that fully functional equipment saved lives.

Uniform and adaptation:

Early Regimental uniforms were often developed from contemporary fashions or adapted from existing, sometimes foreign, Regimental designs. In the eighteenth century the commander of the Regiment was usually at liberty to select a uniform for his men. However, if a Regiment was conferred a Royal Warrant then the uniform pattern tended to be determined by the reigning monarch. With the exception of dress distinctions between officers and soldiers the purpose of the uniform was to effect a similar appearance amongst the ranks that was at once distinguishable from that of other Regiments. One way in which the uniformity of appearance could be enhanced was by ensuring that garments were manufactured to a Regimental pattern and fitted by tailors enlisted amongst the soldiers. Once uniforms were fitted there was still the issue of adornment of jackets with badges and rank distinctions. In order for the tidiness of appearance to be retained exact positions of placements were prescribed for each of the fitting. Regimental tailors were made responsible for the attachment of the fittings or the marking of the correct position, as can be seen from 1941 DLI Standing Orders (p 61: para 428c): "Officers commanding companies will ensure that the necessary holes for collar badges and titles are correctly punched in jackets, etc, before they leave the tailor's shop. Also that the necessary green backing for chevrons is sewn on."

Once a uniform was approved the soldiers were obliged to wear it regardless of its suitability for the different climates and conditions that they might encounter. This

was particularly unfortunate when the uniform caused discomfort to the men, since it affected morale. Despite the seeming rigidity of the uniform it was not unknown for alterations to be made. On occasion uniform elements of foreign regiments, especially helmets, were adopted when there was victory over the enemy and the use of the enemy helmet would be a reminder of their glory. It was not unknown for uniforms to be exchanged by commanders who prefer the look of another they have seen. The Newcastle Hussars adopted the uniform of Polish Hussars for this very reason. However, pragmatism often features in the evolution of uniforms. For example in the eighteenth century The Queen's Bays (later 2nd Dragoon Guards) allegedly earned the nickname "The Rusty Buckles" by returning from service in Ireland to discover that all other cavalry regiments had converted from steel fittings and furniture to brass (Beckett: 1999; 80). This anecdote provides an important insight into early Regimental culture by demonstrating the contemporary awareness of materials chemistry and the benefits of exchanging metals to improve the longevity of equipment and uniforms. Although elements of Regimental tradition might favour conservatism, technological advancements that would improve the endurance and performance of equipment and weapons were becoming increasingly vital for success in war.

Certain items of uniform were abandoned as a result of associated impracticalities. The white trousers of some nineteenth century regiments, for example those of 18th Royal Irish Regiment in the 1840s, looked elegant, but became grubby rapidly. The need for frequent washing meant that the men often wore the garments damp, and so the white trousers were abolished for home service in 1845 (Holmes: 2001). In a similar way a notice in the DLI's Bugle announced the imminent discontinuation of their tunic: "At the end of March next, the tunic will become a thing of the past, its use being discontinued. It is an article of dress not at all adapted for India, so that all can say good-bye to it without regret" (Bugle No. 85: 1896; 968). When there was an element of choice in uniform garments a preference was often expressed in the Standing Orders on grounds of suitability: "It is desirable that captains should induce their men to wear flannel shirts instead of cotton ones, as being more conducive to health and cleanliness" (Gillespie: 1876; 153, para 563). When it was clear that certain items, considered to be impractical or an inconvenience by the soldiers, were not likely to be replaced good natured jokes were sometimes made about the article in

question. For example the 'valise' bag was described as: "An ingenious contrivance invented for the purpose of exemplifying how little it is possible to get in a small bag" (Bugle No. 95: 1896; 1067).

Uniforms or elements of uniform were not only replaced when the pattern of dress was exchanged or adapted, but also when garments wore out in the natural course of events. In an 1884 copy of the Officers' Troop Book of the 19th Hussars items of uniform are listed with the frequency with which each will be replaced at no cost to the soldier. This implies an expected longevity for various garments and was probably based upon observations of how long articles on average tended to last before they were deemed beyond repair. The itinerary reads as follows:

1 Cloak and Cape, Sextenially.
1 Lance Cap, Quadrennially.
1 Tunic
1 Pair Pants
1 Pair Gloves Annually
1 Forage Cap

1 Jacket Stable
1 Pair Overalls
1 Pair Boots Knee Biennially
1 Pair Wellington

The existence of such a list might have encouraged the soldiers in the care of the uniform, since they would have to fund the replacement of articles that wore out "too" rapidly. There is a similar list, under the heading "Duration of Appointments" that details "the periods of expected duration assigned on Home Service for Cavalry Accoutrements and Appointments" (1884: 42). This ranges from twenty years for a Farrier's Axe, down to five years for Bridoon Reins. It is acknowledged at the bottom of the page that adjustment of the duration of articles is to be allowed for periods of Foreign Service, where the climate and nature of use of items are variable factors. Apportioning of a lifespan to uniforms and equipment is tantamount to acknowledging that certain artefacts had a finite period of use, beyond which they were not expected to be retained.

Unique history:

Unity within Regiments was crucial for the men to operate as a cohesive body. The unique identity bestowed upon each Regiment assisted the development of esprit de corps, as did allusions to the Regimental historic pedigree. Past heroic deeds and battle honours could instil men with a sense of pride in the present. An editor of the DLI's "Bugle" comments on the editorial in the monthly paper of the 5th Fusiliers, "The St. George Gazette", which sets out its aims as: "A record of events for reference, if necessary, either immediately or in years to come…. [and] a means of encouraging esprit de corps" (Bugle No. 85: 1896; 989). This acknowledges the fact that Regimental history plays a vital role in day to day Regimental culture. Recognition of the importance of the past, however, is only a portion of the cycle. It follows that contemporary events become the history of the future and by the nineteenth century the value of record keeping was firmly accepted. In an edition of the Bugle there is an article devoted to the preparation of inks with good permanence that can be employed for use in records:

"Any fluid for writing purposes must have an attraction (chemical) for the fibrous matter of which the paper is made, or for the sizing material used to produce upon the paper a homogeneous surface - this is necessary to prevent the removal of the ink by water; and this power of fixing itself is one of special importance, as upon it depend the permanency and indelibility of the records" (Bugle No. 97: 1896; 1092). "A useful method of restoring faded old writing, or where chemicals have been used for the purpose of removing it, is to plunge the paper into a bath of per-salt of iron" (Ibid).

The article not only recognises the importance of records and their durability, but also demonstrates an awareness of how the longevity might be achieved.

There are examples of the bestowment of gifts with the intention of the artefacts being retained by the Regiment for posterity. In a later edition of The Bugle there is a notice describing the endowment of a large silver cup, from the retiring Brigadier-General F. H. Whitby, upon the Officers' Mess. Not only was the cup inscribed with the name of the donor and the date, thus embedding it in the history of the Regiment,

but the cup was also accompanied by a card supplying the following information: "This cup is a replica of one designed and made in 1741 by Paul Lamerie. The original is now in the possession of a London City Company and is treasured as a specimen of the silversmiths' art in the reign of George II". The author (now anonymous) of the notice proceeded to write that the cup would be "handed down to generations of the regiment," but that it would "never be valued so highly as by those who knew him [the Brigadier-General] personally" (Bugle No. 326: 1902). This statement was almost certainly designed to flatter, but it also conveys a salutary message. The cup would be most meaningful to the recipient generation, since these soldiers knew the Brigadier-General and the gesture would be most relevant to them. In the future the cup would continue to be a beautifully crafted silver artefact embedded in the history of the Regiment, but the circumstances of the gesture would perhaps be diluted by temporal detachment from the event.

Colours:

One of the original functions of Regimental Colours was to provide a visible rallying point amidst the confusion of battle and marking the position of the commanding officers. Along with the practical application the Colours have always possessed a symbolic dimension, representing the cohesion and esprit of the unit, the loyalty of the Regiment to Crown and country, and associations of the Regiment's gallantry and traditions. Most armies of the seventeenth century carried separate Colours for each troop or company, but the number permitted to be carried by a regiment was limited to two in the year 1743. One Colour was the King or Queen's, represented by the Union Flag and the second was to be the Regimental Colour, which a Royal Warrant of 1751 designated to be the contemporary facing colour of a Regiment's uniform (Beckett: 1999; 68). The Queen's Colour bears the Battalion number and selected battle honours and the Regimental Colour hosts a central insignia unique to the group, surrounded by a further selection of battle honours. Colours were borne into battle until 1881 and the holes and cuts in many examples serve as reminders of the action witnessed by most men and Colours, thus increasing their significance to the Regiment. On occasions Regiments would be awarded new Colours, often as a reward for service and it is then that the old Colours are "laid up". In 1898 it became compulsory to display retired Colours in churches or other appropriate public buildings. Battle damage was not initially repaired, since it was regarded as a mark of

distinction. However with the passing of time and exposure to aggressive environmental conditions some Colours showed signs of advanced deterioration. Interventive action under such circumstances is deemed to be acceptable, since it can prevent or retard complete loss of the artefact. Textile conservators are sometimes enlisted to administer treatment to severely damaged colours, as are some manufacturers of Colours, some branches of which have workshops dedicated to repair.

The reverence which the Colours are accorded is reflected in instructions in the Regimental Standing Orders: "The colours are to be treated with the greatest respect by all ranks, and invariably to be saluted by everyone who passes them; it need hardly be added that they are to be defended to the last extremity, and at all personal risk" (Gillespie: 1876; 52, para 218). Since the Colours constituted the ultimate symbol of honour for the Regiment the defence of the Colours with the lives of soldiers is understandable. It was recognised that the Colours, along with all other military artefacts, required a certain amount of care and attention and this was also prescribed by the Standing Orders:
"The adjutant will see that they are occasionally opened out and aired, under charge of two colour sergeants" (Ibid: 1876; 51, para 216).

An unnamed Officer, who serialised a history of the DLI in The Bugle wrote emotively about the significance of a Regiment's Colours:

"Since the British Army was formed according to its present constitution it has been the custom to give to each Regiment Colours, to be a rallying point in time of danger. This is no new custom but has come down from the earliest ages of Chivalry. In a British Regiment they are the symbols of loyalty and devotion to the Crown. They are a symbol of attachment to Old England, and they are the Symbol of that intense feeling for duty which causes a man to offer up his life rather than to fail in the execution of it."
There seems to be little doubt that the Colours stirred the emotions of the men and the above paragraph repeats the soldier's duty to offer his life in the defence of the Symbol. Sir Edward Hamley succinctly encapsulated the essence of the Regimental

Colours when he penned this verse upon seeing old Colours of the 32nd Foot in Monmouth Church:

"A moth-eaten rag, on a worm-eaten pole,
It does not look likely to stir a man's soul,
'Tis the deeds that were done 'neath the moth-eaten rag,
When the pole was a staff, and the rag was a flag."

Here there is a suggestion that the Colours might be allowed to rot to nought once laid up in a Church and while there are no doubt instances of such an occurrence and unrepaired battle damage is bound to take its toll, it would not be accurate to suggest that this was the inevitable destiny for all retired Colours. As mentioned above remedial action is taken, when opportunities arise, to retard as far as is possible further deterioration. It would make little sense if an object so revered during active service was allowed to disintegrate into a pile of dust.

Artillery Regiments did not possess Colours, but sought to defend their ordnance, which are regarded to be the equivalent of Colours. There are heroic tales of soldiers who have defended their position and guns down to the very last shell. On 1st September 1914, at Néry, three members of "L" Battery of the Royal Horse Artillery won Victoria Crosses for their gallantry in supporting their 1st Cavalry Brigade against the German Cavalry. "L" Battery countered heavy fire from 12 German guns with only three 13-pounder guns of their own, two of which were quickly knocked out of action. Despite injuries the gunners fought on until reinforcements arrived, which coincided with the firing of their last shell. A battered 13-pounder from Néry is now displayed at the Imperial War Museum (Beckett: 1999; 37).

Anecdotes promoting tradition:

Although artefacts play an important role in Regimental culture the soldiers' care of material culture and symbols that support Regimental history are simply elements of a greater Regimental tradition. Certainly by the nineteenth century it was accepted that myth played a not insignificant role in Regimental culture. For example, in the DLI's (Durham Light Infantry's) weekly publication, "The Bugle," a paragraph about the Chelsea Pensioners declares: "Nearly all of these old warriors are well decorated with

medals, and would doubtless tell many a 'yarn' of the days when they were young and hearty, and did good service for Queen and country" (Thursday 16th April, 1896, No. 92; p1032). This gives the impression that slightly spurious or exaggerated tales were considered to be a legitimate aspect of Regimental history, perhaps because they fostered esprit de corps.

The Gurkhas of Nepal were first encountered by the British army in the eighteenth century. Goorkhas, as they were then known, took their name from the name of Gorkha, which was in turn named after the Hindu saint, "Gorakhnath". The martial qualities of the Gurkhas became apparent when the East India Company found itself at war with Nepal (1814-1816), and so took the opportunity to recruit Gurkhas into the company's army during an 1815 truce. At the cessation of the war a treaty was signed with Nepal that secured the alliance of the Gurkhas, who went on to serve in many campaigns. The courageous exploits and hardy constitutions of the Gurkhas have become the stuff of legend, inspiring the apocryphal tale of the Gurkha kicked in the head by a mule. It was said that the Gurkha complained of a headache while the mule went lame (Beckett 1999: 42-43). This tale encapsulates the fighting spirit and endurance that were regarded to be admirable qualities in a soldier.

It is not uncommon for myths to centre on a famous character from history. There is a tale in folklore that relates how Sir Francis Drake, upon his deathbed, was said to have asked that his drum be conveyed to Plymouth and struck at times of national danger, where-upon Drake would return from the vale of death to help England (Young & Chatto, 2002). Sir Henry Newbolt even recorded the myth in the following verse:

"Take my drum to England
Hang it by the shore
Strike it when your powder's running low
If the Dons sight Devon, I'll quit the port o' Heaven
And drum them up the Channel as we drummed them long ago" (Newbolt).

Such stories serve to inculcate the soldier with a sense of national pride, along with a depth of history. Such noble proclamations can be referred to in times of crisis and doubt and raised up as ideals to emulate, providing encouragement and, perhaps, a

degree of reassurance. The Drake myth is based upon an artefact, which acts as a powerful symbol. From this it is possible to project how some Regimental artefacts might be retained to support myths unique to a Regiment and therefore doubly potent as a symbol to the men of the Regiment. The factual truth becomes a secondary concern, and the object takes on symbolic value meaning that its repair will extend its existence and so sustain the myth.

Repair and retention:

Collections of regimental paraphernalia displayed in museums do tend to receive the attentions of conservators when it is deemed, usually by a curator, that interventive measures are required. In museums where conservators are employed there would usually be an environmental monitoring policy in place to ensure that optimum display and storage conditions were maintained for the collections, which often comprise organic and inorganic components. Equipment and accoutrements manufactured for the British armed forces are made to approved and standardised patterns, by a limited number of dedicated suppliers, such as Hawkes Tailors of London. This is an advantage in conservation work when a degree of restoration is desired, because the form and composition of missing elements can often be traced with great accuracy. Yet when there is need for extensive restoration, as was the case for a bullion festooned sabretache at the Discovery Museum, Newcastle, skilled craftsmen are sometimes engaged to undertake the task. The bullion was detached in places and damaged, and so the article was sent to its appointed manufacturer for restoration. This action constituted a combination of restoration and conservation principles, since it was important for this artefact to be presentable and smart – in keeping with the regimental ethos of cleanliness and smartness - but not pristine or new, since there was no intention of extinguishing the history of the object. In the context of regimental culture this decision would be regarded as appropriate, since it enabled the visual integrity of the sabretache to be maintained, in a manner which supports regimental tradition by employing dedicated army manufacturers to undertake the conservative measures.

Conclusion:

Care of material culture is an integral part of Regimental Culture, since soldiers could not function efficiently without well maintained uniforms and equipment. It is clear that systems were established for the repair of damaged and broken articles and that soldiers untrained in the crafts of the artificers were not usually permitted to attempt repairs. Much of the material repaired for the Regiments would be treated in such a way that the original function of the item could be retained or returned. If the function of Regimental equipment was lost there was often little point in retaining the article and it is easy to see the pragmatism of this policy when regimental material culture is placed in context. Men's lives depended upon the reliability of weapons and instrumentation, and so if the function of such artefacts was compromised, and the equipment deemed irreparable, it would probably be scrapped.

Artefacts that have no further use for the Regiment need not be void of value and, therefore, have the potential to take on new roles. In the case of Regimental objects there is often a transition from functional value, at the end of the artefact's functional life, to symbolic value. The British guns at Néry illustrate this shift in emphasis. All the canon employed to defend the British position were damaged catastrophically and yet the retention of one gun at the Imperial War Museum is a symbol that stands as a testament to the bravery of the men, and acts as a permanent reminder of their actions. In other museums there are to be found bullet ridden uniforms and cigarette cases that are accompanied by tales of miraculous deliveries, or horrific demise, and their symbolism eclipses original use or function. What connects such objects is the manner of their retention. The symbolism can be derived from context and this tends to be determined by individuals – the individuals who retain the artefacts. At times the symbolic artefacts are damaged battle trophies and sometimes they are souvenirs, gifts or other mementoes that serve as reminders of a battle, a campaign or a period of time and proof of the event. Crucial to the dynamic of the treatment of an artefact is its ownership. With Regimental ownership the care of material culture is prescriptive – it is repaired, when necessary, by the relevant experts, or discarded. Personal ownership affords a more individual approach. The following verse is a riddle that follows the story of a soldier's clay pipe as it is damaged and repaired:

An Ode to A ……

He said that I was beautiful
I knew that he was right:
My skin is soft as satin,
And the purest lilywhite.
My figure was so slender,
My colour was so fair
I often thanked my lucky stars,
He'd found a gem so rare.
From that day and for many months,
Together we were found:
And as it was in summer
I began to get quite browned.
When nothing else would comfort him,
He'd always come to me
And when he pressed me to his lips,
All care and pain would flee.
Why was it fated not to last?
This happiness forever!
Alas! An accident occurred,
That did our friendship sever.
One day while in the street with him,
I had a nasty fall.
I think the fault must have been his:
It was not mine at all.
I never was the same to him,
As I had been before,
Though he treated me with kindness
And tried to love me more.
He loaded me with silver;
But it was all in vain
I never could be made to look
So beautiful again.
And now his love is changed to hate,

His love that was so ripe,
And here I lie forsaken
As a broken _____

Meerschaum Pipe (Bugle No. 91: 1896; 1027)

The poem in a few short lines conveys much useful information about the treatment of personal possessions. The poem introduces the pipe as something held precious by the soldier, which helps to explain why it was retained once damaged, instead of discarded. The nature of the repair is detailed, with the broken parts being joined with silver. It can be inferred that the repairs were undertaken by the pipe's owner, or commissioned by the owner, and that such effort is exerted because of the personal value the artefact holds. Although such repair was beyond the jurisdiction of the Regiment its purpose was to prolong the functional life of the artefact and mirrors Regimental attitudes.

Sometimes the preservation of artefacts would for many years be as rudimentary as their retention as opposed to their discard. A war damaged memento might reside with a soldier until his death, during which time the artefact is kept in a relatively safe place but is little touched. If the object is later donated to a (Regimental) museum by the soldier's family measures would probably be employed to ensure a stable environment and retard any further deterioration. Remedial action is dependent upon a number of factors. The original appearance and function of the artefacts are retained or recreated, along with the Regimental principles of cleanliness and functionality.

A good illustration of these factors can be found in Newcastle's Discovery Museum. There is on display an extremely buckled bugle, damaged to the extent that the chances of it sounding are very much in doubt; and yet the instrument is highly polished. This seems to constitute a mixed metaphor with the symbolism of the crushed artefact competing with the Regimental ethic of cleanliness, even though this is only considered to be relevant when an item is functional. The message of the bugle is initially confusing, but it could perhaps be deciphered.

One purpose of Regimental museums is to uphold Regimental tradition and honour and to do so with the utmost respect. Making artefacts as visually presentable as

possible, through cleaning and polishing and aligning with Regimental ethics, is one way in which this end can be achieved. Therefore there is no deliberate attempt to deprive the buckled bugle of its symbolism by polishing it, but rather the demonstration of concern to uphold the memory of heroic deeds.

The polishing of medals lends weight to this argument. Medals in museums are usually kept polished on display, much as they would have been when worn by the soldiers. Soldiers and their families would be greatly put out to see medals on display – such highly symbolic artefacts – in an uncleaned state, since this is the antithesis of how they should appear and smacks of neglect. In fact such is the importance of the bright appearance of the medals that some are worn away to mere disks, and yet the valour that they symbolise still persists. Worn medals are not replaced, since the wear does not detract from the deeds that they represent. The medals were awarded in accordance with Regimental tradition and tradition maintained in their continued polishing. The importance of this in Regimental culture should not be underestimated. As Field Marshall Lord Birdwood wrote in 1942, "Let us preserve our British regimental traditions with all our care, and cherish their separate glories, for they are a precious part of our heritage…. Men live for them, and small as they may seem, will die for them."

Survey Results for Regimental Culture

See Appendix 6 for definitions of the categories used in the charts.

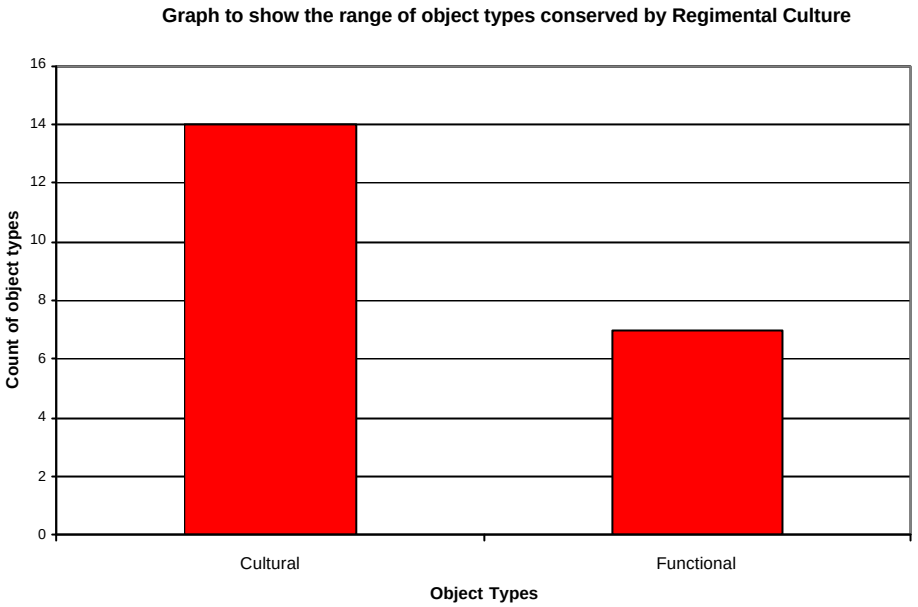


Figure 4:1

Figure 4:1 is a chart that shows the range of object types conserved by Regimental Culture and depicts a split between cultural and functional objects, with a higher proportion of cultural items. This social group places great store in symbolism, visual representation and myth support, which is why a high proportion of the artefacts are ”cultural”. When this outcome is compared with the reasons for conservation, as seen in **Figure 4:2** it becomes apparent that some cultural and functional property has transmuted to personal value. This can be explained in the following way: items that belong to individuals have unique significance and this perspective overrides the effects of cultural value and functional value.

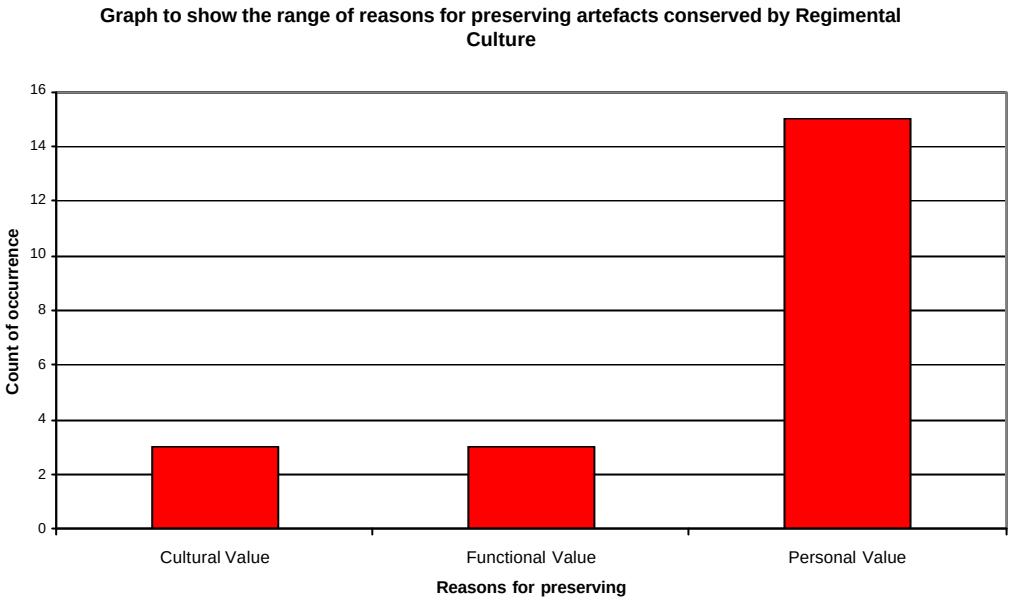


Figure 4:2

Figure 4:3 is a chart showing the range of materials conserved by Regimental Culture. The organic materials, leather and textile represent the uniform element. The inorganic materials – all metals – of copper, iron, silver and tin represent, weaponry, instruments, silverware and personal effects. The dominant material, copper, is most prevalent as a result of the high proportion of medals that make up the assemblage.

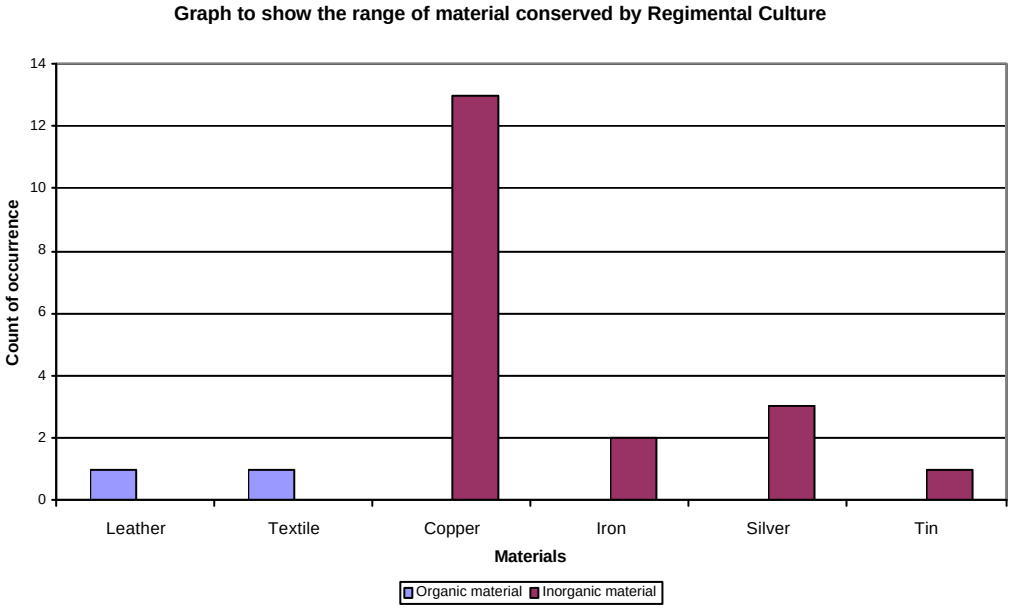


Figure 4:3

Figure 4:4 is a chart depicting the state of deterioration found in the objects conserved by Regimental Culture. There is some limited evidence of superficial and extensive deterioration, but most objects fall under the moderate category, which is again related to the presence of medals. Regimental Culture places great emphasis on the maintenance and care of artefacts within its remit, which is why extensive deterioration is rare unless there are instances of battle damage. It is interesting to note that the moderate damage actually stems from the habit of maintaining and caring for the artefacts, since the medals that display moderate deterioration have been worn through repeated polishing to maintain their bright appearance.

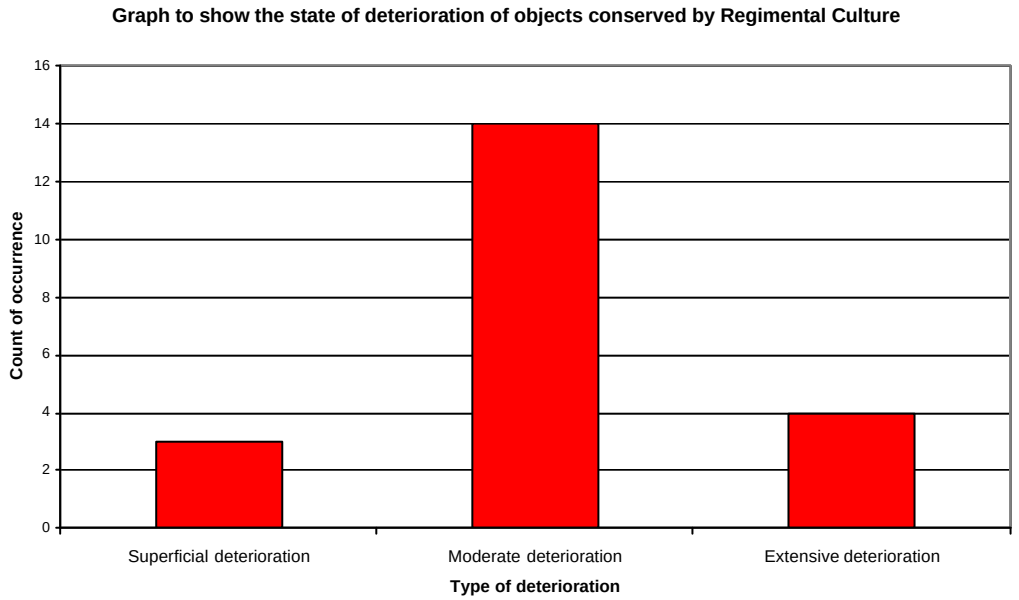


Figure 4:4

Figure 4:5 is a chart that shows the balance of conservation techniques applied by Regimental Culture. What it demonstrates is that the focus of the treatment of material culture is on cleaning, which is carried out to a thorough extent in order to fit in with prescribed notions of behaviour and propriety.

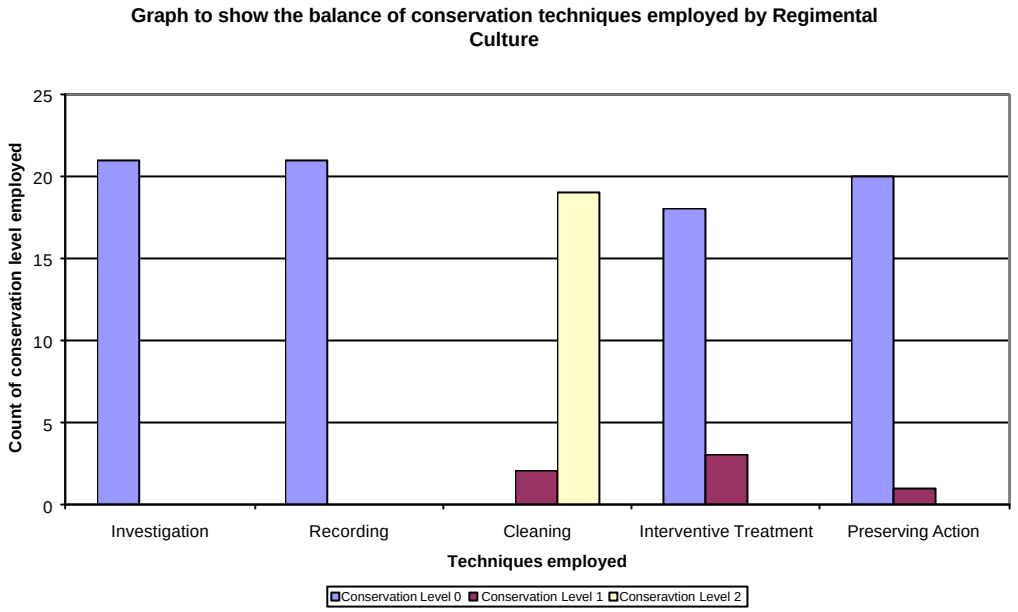


Figure 4:5

Chapter summary

What is conserved :

This group conserves objects designed to perform a cultural role, such as medals and functional items, for instance uniforms.

Why have the objects been conserved?

Most of the items have been conserved because they represent personal heirlooms. Medals in particular have very strong associations with personal history and are signifiers that authenticate a personal narrative.

How have the objects been conserved?

The artefacts have been mainly cared for through cleaning. The bright, shiny appearance of medals is intimately linked with Regimental ideals of cleanliness and discipline.

CHAPTER 5

Material culture of the Roman Empire

This chapter considers the Roman material culture introduced to Britain and its effect on material culture in Britain at the time. In order to gain an understanding of the culture being brought into Britain by the Roman conquest, we need to take into account the context of the material culture being incorporated. By considering the ways that Romans viewed objects we can begin to understand the reasons that they were brought to Britain and introduced into the material culture, and why in some cases (such as samian ware) the objects were widely subsumed.

There are a number of factors that have a bearing on consideration of Roman material culture in Britain, such as the rationale of the Roman expansion of the Empire into Britain, the manner in which the Empire was expanded, and the context into which that material culture was being introduced. As Millett (1990, 2) notes, "in her expansion, Rome dealt with peoples, not territories". As is discussed in further detail below, the Romans used existing hierarchies to exert control by obtaining the allegiance of the existing elite to maintain stability and control in territories such as Britain, at the outer reaches of the Empire.

We can of course study Roman era remains from around Britain, which enables us to discern information about the way of life in Britain at the time. However, as a result of the eruption of Mount Vesuvius in Italy in 79AD, the nearby towns of Pompeii and Herculaneum were preserved as partial records of Roman life at that time, by the volcanic ash and mud that overwhelmed the towns respectively. As is discussed further below, there are a number of compelling reasons why one cannot extrapolate the archaeological data from Pompeii and Herculaneum directly to Roman Britain, however the information we can glean from those towns can provide contextual information which can assist in our understanding of the Roman Britain.

Pompeii and Herculaneum:

Rare terracotta architecture attests to Etruscan influence in Pompeii that was contemporaneous with that of the Greeks. It was in the fifth century, thought to be around 425. BC that the Samnites from the countryside descended upon the town. Pompeii in the Samnite period enjoyed an era of prosperity and urban expansion. It was at this time that the main public buildings were erected or re-designed and the former Doric temple was rebuilt (De Franciscis: 1979; 3). Pompeii, however, was not recognised as a Roman colony until 80 BC, several years after the end of a period of civil war in 89 BC, when Sulla besieged and captured the town (De Franciscis: 1979; 5).

During the Roman period Pompeii, under the *pax romana*, underwent substantial renewal in the field of private and public construction. Some of the Hellenistic influence was expunged and the Forum, theatres and other public buildings, including the temple of Jupiter were restored. The Great Gymnasium and temples to Augustus and Vespasian were thrown up in this period (de Franciscis: 1979; 5). The style of Pompeii had always been eclectic as a result of the influence of the diverse population. However, under the Romans even new styles brought to the town reflected the eclecticism of the capital itself. Although Pompeii recognized Roman authority from the end of the fourth century BC, Roman citizenship was not bestowed upon the town's inhabitants until the first century BC. Pompeians had been incorporated into the Roman realm of government, trade and aesthetics long before citizenship was granted, and so it is difficult to define the point from which they could be considered to be culturally Roman (Bon: 1997; 11).

Like Pompeii, Herculaneum underwent Oscan and Greek influence before becoming a Samnite town in the fifth century BC and finally ceding to Rome after 89 BC. Unlike Pompeii, however, which was afforded political autonomy, Herculaneum became a Roman *municipium*. For the rest of its existence there are few recorded events of historical importance at Herculaneum (De Franciscis: 1979; 10).

The beginning of the end:

In AD 62 the town of Pompeii was devastated by a major earthquake – a factor that is often somewhat overshadowed by the apocalyptic eruption of Vesuvius in 79 AD. The damage to the town after the seismic activity was extensive and it is possible that some of the buildings might have been abandoned at this juncture (Bon: 1997; 10). The amount of reconstruction required for the town was enormous and the scale precluded a rapid restoration. The restoration of small houses and businesses was quite prompt, but work on larger residences required more time. Although urban administration made great efforts to restore the Forum and public buildings the work was still in progress at the time of Vesuvius' eruption (De Franciscis: 1979; 6). Some houses, such as the House of the Vetii (Seneca Nat. Quaest VI, 15, 1-2) were totally rebuilt and the Temples of Vespasian and Isis were reconstructed. A number of larger houses were roughly repaired and later subdivided into smaller "apartments", while others were converted into commercial properties, such as the Fullonica Sterphani, or fuller's shop. Restoration work was often detectable by the new scheme of wall decoration that was dubbed the "fourth style" (Lazer: 1997; 103).

Décor:

Deiss (1966: 31) asserts that houses in Pompeii and Herculaneum were considered to be important possessions, since they were built with a view to generations, perhaps centuries worth of occupation. The décor and layout tended to be altered over time to mirror current trends, but Deiss (Ibid) argues that the familial sanctity of the house remained. One reason that a palpable ancestral aura could be detected was the ubiquitous presence of lararium – shrines for the Lares and Penates, household gods – which transcended wealth divides. In some instances shrines were painted directly onto a wall and it would seem that the potent symbolism meant that this could act as a worthy substitute for a three dimensional shrine (Ibid).

Between the fourth century BC and the end of occupation in the first century AD changes in decorative fashion ran in tandem at Pompeii and Herculaneum. The distinct styles of wall painting have been assigned phases according to their occurrence. The "first" or earliest style comprised planes of different colours and sometimes painting to imitate polychrome marbles. The "second" style introduced the illusion of space through the use of perspective in the depiction of architectural elements, which simulated depth. The "third" style was rendered in an

impressionistic fashion, with bold brush strokes creating fantastic schemes of slender columns, small repeated motifs and animal and human figures, whilst retaining the depth of perspective innovated in the "second" style. The "fourth" and final style persisted with imaginary architecture, but became more ornate and the perspective was enhanced to allude to even deeper spaces beyond the room. Theatrical scenes tended to be the theme for designs (Deiss: 1966; 33).

Pompeii and Herculaneum as complete material culture assemblages:

With Pompeii sealed with volcanic ash and Herculaneum with volcanic mud in 79 AD one might be forgiven for the assumption that the archaeology of the towns would yield complete artefactual assemblages that reveal the diurnal living of the population, from which could be extrapolated "Roman" treatment of material culture. Unfortunately there are numerous reasons why this could not be the case. One of the problems that plagues the study of artefacts from Pompeii is the concentration of excavations upon the larger, elaborate houses, and the subsequent non-publication or partial publication of the excavations, which complicates the study of individual houses and skews the emphasis of the data that is revealed (Berry: 1997).

The artefact assemblage of Pompeian houses should not be regarded as complete, since there is evidence to suggest that people fleeing the eruption sometimes seized movable valuables, such as gold and silver plate and jewellery. This fact is attested by the appearance of such items found adjacent to skeletons in the streets, thus causing categories of objects to be removed from the contexts of the houses. Furthermore the artefacts comprising organic components, such as food, textiles, plates, baskets and wooden furniture were ostensibly destroyed through carbonization, leaving very fragmentary evidence (Berry: 1997; 186).

To compound the difficulties associated with Pompeian artefact study the excavation records – Giornali degli Scavi – are often hand written and sometimes inaccurate, confusing house or room numbers, or the date of excavation. In this way there are sometimes discrepancies between the Giornali and the Inventories of artefacts. What is more the Giornali do not hold records of every artefact excavated, since there is an emphasis on valuable items, to the detriment sometimes of more mundane domestic items, which might be excluded. In addition even some items that make it into the

Giornali might not be transferred to the Inventories – for example of amphorae only those with inscriptions might be given inventory numbers (Berry: 1997; 186-187).

However, the Giornali do have advantages, since they describe the material excavated as either disturbed or undisturbed by previous explorations, affording archaeologists the opportunity to evaluate artefacts that should represent de facto complete assemblages from 79AD. The Giornali also contain a record of the state of a house upon excavation, noting any restoration work and the types of wall-paintings present. The latter is of particular value, since exposure in the years after excavation has often erased this evidence (Berry: 1997; 187).

The notion of post-eruption looting has been put forward by various scholars (Richardson: 1988; 25-27 and Corti: 1951; 82-83) to account for the absence of certain expected finds in Pompeii. Empty statue bases in the forum and missing marble flagstones and veneers have been cited as potential evidence of such activity. However, Descoeudres (1993: 173) proposed that the town was divested of numerous valuable items in the intervening period between earthquake and volcanic eruption. He concluded that further earthquake activity had precipitated an exodus of inhabitants, causing a diminution of population size in the last seventeen years of occupation (Lazer: 1997; 105).

Unlike the destruction wrought by the hot volcanic ash at Pompeii the volcanic mud that engulfed Herculaneum did no incinerate, but merely carbonise, in many instances, and then preserve the wood. This phenomenon helped to reveal the full extent of the use of wood in the towns, which was greater than had been anticipated through excavations in organically denuded Pompeii. Architecturally wood was employed for windowsills, beams, stairs, shutters and doors. There was extensive use of wood for furniture in the forms of tables, chairs, beds, shrines, cabinets and cupboards (Deiss: 1966; 34).

By contrast to many properties in Pompeii and Herculaneum the artefacts at the Villa of the Papyri (Herculaneum) seem to represent a fairly complete assemblage. There has been discovered a large number of sculptures, a number of which were antiques by the first century AD and a library of papyri containing 1787 volumes and the life's

work of the Epicurean philosopher Philodemus (Deiss: 1966; 54-55). Ninety sculptures have been recovered from this villa and include: thirteen large bronze statues and seven large marble statues; eighteen medium or small bronzes; thirty-two bronze busts and fifteen busts of marble (Deiss: 1966; 53). Amongst the finds is a bronze head of the Dorphoros (lance-bearer), which had been adapted to surmount a herma. The head is a first century BC copy, by the master sculptor Appollonius of Athens, of the original full-length nude by Polyclitus - a Greek sculptor working in the fifth century BC. The copy is considered to be the finest known to exist, which is of significance, since the original sculpture was one of the most celebrated in antiquity, hailed for its perfect proportions (Deiss: 1966; 48-49). In the peristyle the head of an Amazon was revealed and this too was a copy, this time the original is probably credited to Phidias (Deiss: 1966; 49). Also found in the peristyle was a number of busts of philosophers. A nearby room yielded a bronze head of a bearded Dionysus (or maybe a priest of the Eleusinian mysteries), which is recognised as a classic work of the school of Praxiteles (Deiss: Ibid).

The sculptures ranged from archaic to first century contemporary and a number were original masterpieces and any copies were executed by master sculptors. Maiuri, the instigator of the modern excavations, described the collection as having been chosen "with the eclectic taste of a connoisseur and lover of the arts" (Deiss: 1966; 52). Supplementing the celebration of philosophers, poets, historians and even a bust of Ptolemy prince of Egypt, artistic renditions occur of deer, a jumping piglet, a group of five life-size women dubbed the "dancers of Herculaneum" and the now famous "Sleeping Faun" (Deiss: 1966; 52). The faun bears the influence, if not the handiwork, of the master Lysippos, who was a favourite sculptor and contemporary of Alexander the Great (Deiss: 1966; 53).

Buildings of the Samnite period show Hellenistic influence and although some works of art were imported from Greece most were of local manufacture (De Franciscis: 1979; 5).

Roman Britain

As discussed at the start of this chapter, the information and understanding we can glean from examples such as Pompeii and Herculaneum provide an albeit limited

insight into and context for the material culture of the Romans that was brought into Britain.

Although the Roman Empire might be regarded, from a distance, as a uniform entity comprising Romanized peoples who adopted Roman material culture, this is a rather misleading impression, since the character of the Roman Empire, "was that of a federation of diverse peoples under Rome, rather than a monolithic centralized block" (Millett: 1990; 8). Native adoption of Roman material culture and architecture is not in itself evidence of the supplanting of one cultural life-way with another. It is important to recognise ethnic identities when dealing with the treatment of material culture in the Roman Empire. Already the superficial unity of the Empire is questionable if the provincial populations were not quite as Roman as imagined. It would, perhaps be expected that treatment of and attitudes towards material culture might differ between elite and non-elite groups. However, what becomes elucidated through the study of "Roman" material culture is that there appears to be a great distinction between the actions of the Roman and Mediterranean elite and the Romanized elite of conquered provinces.

The social power structure in Rome was oligarchic, sustained through the competition of the wealthy elite. A certain degree of status would be attained through noble birth, but to become distinguished and gain desirable political prestige, military service and success was a sine qua non (Birley: 1981b; 4-35). Status and concomitant economic success were principally defined by land ownership (Finley 1973; Hopkins 1978). This necessity provided the compulsion for territorial expansion in the Roman Empire, since the acquisition of new lands tended to be a consequence of foreign victories. Although conquering elites could "benefit financially from the booty of conquest" (Finley: 1973; 56) the primary motivation was to secure personal political advancement. Since territorial expansion was not determined directly by centralized Roman government this explains the disparate nations subsumed under the standard. Although Rome was nominally the hub of Roman administration for the Empire, provincial administration tended to be undertaken with the cooperation of native elites, thus reducing the military burden of the conquerors whilst maintaining the status quo of traditional local aristocracies (Millett: 1990; 8). Through cooperation, rather than retaliation, a mutual agreement stood between the native and conquering

elites whereby status and power need not be relinquished in return for loyalty to Rome and acceptance of her governance.

Early in the imperial era an emperor needed control of both the landowning senate – the traditional aristocracy – and the army, for power to be securely retained. For this to be achieved an emperor had to be able to demonstrate military prowess, much in the same way as any other elite citizen. The career of an aristocratic Roman tended to begin at the age of about 24 with legionary service as a military tribune (tribunus legionum). At around 32 the career might progress with service as a legionary legate (legatus legionum) or commanding officer, if praetorian rank had been achieved (Birley: 1981b; 8-24). At his accession as emperor Claudius lacked military conquest and therefore the requisite prestige of a leader, and so he looked to Britain as an opportunity to attain his imperial status. Claudius selected Camulodunum (Colchester) as the target for his campaign to legitimise his position. The selection was sagacious, since it represented the capital of the Catuvellauni – the major centre in Britain. To mark the success of the campaign a commemorative arch was erected in Rome to augment the emperor's triumphal procession (Millett: 1990: 40-41).

In the province of Roman Britain, by contrast, domination by elite tribal families had already been established by the Later Pre-Roman Iron Age (LPRIA). The prominence of defended settlements in the LPRIA led Cunliffe (1978; 334-43) to postulate that physical might and the threat of inter-personal or inter-tribal war was a palpable force that lay close behind social power. Yet Millett (1990: 35) asserts that stability and sophistication of organization within tribal groups of the period meant that military symbolism, rather than action, expressed in art and ritual, was employed to maintain the hierarchies that had been established through inter-tribal warfare. The high-quality decorated metalwork produced for the elite was such a symbol of social dominance, since it was inappropriate for everyday use. According to Millett (1990: 36) such craft-intensive artefacts were probably displayed in the equestrian sphere, where there would be association with warfare and possibly hunting. The disposal of such martial equipment, at death - an act to be equated with the conspicuous consumption of valuables - is a socially-biased prerogative contrived to demonstrate further elite social domination (Ibid).

Back in Rome it was expected that the resources of wealth available to the elite, usually derived from land ownership, were to be utilised for the public good, which would be manifested by the endowment of public buildings and the provision of feast and games – effectively displays of public munificence. This pattern was discernable in the major Mediterranean communities (Millett 1990, 80). Wealthy families, especially in the early Empire, became embroiled in competitive munificence, and there are numerous inscriptions, statues and public building that attest to this competition. At times this self-advertisement became extravagant to the extent that Principate governors were compelled to impose restrictions on the munificence (Lewis & Reinhold 1955, 341 in Millett 1990, 80). By contrast, the "epigraphic habit" (MacMullen 1982, Mann, 1985) of the Civitates of Britain was much less prominent and the limited epigraphic evidence and sparse public buildings perhaps reflect a relative lack of competition when compared with the central Empire (Millett 1990, 81).

It can be inferred that the connection between competition and extravagant munificence is demonstrated by building type and donor. In the central Empire many public buildings were erected, according to inscriptions, by individual donors. By contrast, in Britain, the provision of sacred structures dominated public buildings, and these were often the consequence of group donation. (This inference excludes military inscriptions in Britain since these are not a reflection of native elite behaviour.) Millett (1990, 82) argues that the pattern results from "social organisation and aspirations." As has been discussed above, to wield and maintain power in Rome, traditional elites were compelled to out-give those competing for conditional status. In the province of Britain, power rested with the leaders of the pre-Roman tribes and their descendants and since power remained with these families, competition was redundant. What is more, it would seem that collective donation reinforced the existing power of the elite. However, collective munificence does not preclude all forms of competition since the provision of basic Roman facilities such as fora and baths in some towns might constitute social display to rival adjacent Civitates (Millett 1990, 82). This level of competition is insignificant in comparison to that within the central Empire since this at times led to profligate replacement or duplication of facilities – a peril of social instability in Mediterranean society (Ibid, 83).

It has been postulated (Applebaum 1972, 223, Frere 1987, 258) that the pax romana in Britain led to increased prosperity amongst the elite and that profits were spent on villa construction. Millett (1990, 9) contests this hypothesis on account of the average size of the first villas. The early villas tended to spring up at a substantial size as new entities, rather than growing from smaller establishments. Millett (ibid) has inferred that villa construction is the expenditure of existing resources rather than newly accumulated wealth. It would then follow that the villa owner has the desire to utilise resources on a new-style building in order to appear more Romanized since the villa did not necessarily offer more comfort than a LPRIA timber house (ibid). Yet Rivet (in Town and Country in Hingley: 2000; 139) suggests that in Britain "the Romanisation of the countryside normally took the form of an increased use of Roman goods and the adoption of Roman style of living by people who continued to farm the land in the old way." Therefore, Roman goods and Roman-style buildings (villas) are visible in the archaeological record, but their presence and use does not preclude the continuation of certain native traditions, such as farming patterns.

As alluded to by Rivet the British archaeological record yields a change in material culture following the rapid arrival of Roman goods to native sites soon after the conquest. For example, many sites in the south received pre-Flavian samian ware and brooches – goods that were considered to be high status in the LPRIA. The speed of distribution was such that artefact delivery sometimes preceded the development of towns in some areas, which would suggest percolation through the existing social network. The plentiful arrival of samian ware challenged its value as a status-defining prestige good since its abundance meant that it reached more of the population in a short period of time (Millett 1990, 98). The impact was of such significance that by the Flavian period, samian ware had already passed its peak of popularity in the south-east (Ibid, 99).

In the LPRIA craftsmen had produced goods that fulfilled the requirements of their patrons and were fitting to the context within which the objects were to be used. Much of the surviving Celtic art, which is characterised by abstract symbols, was high-status material and would have been produced for the elite, which constituted a small proportion of society. The art would have comprised martial equipment, but Roman law forbade the bearing of arms in public (Lex Julia de vi publica – Digest

48.6,1&3), thus requiring a new artistic direction for the expression of social dominance. In the absence of military display, the native elite requested Romanized styles from the craftsmen. It would seem that mosaics ultimately became the replacement for traditional LPRIA symbols, but new media also included buildings and statuary (Millett 1990, 13). Millett (1990, 176) proposes that the use of patterns in mosaics to express social identity might have been of more significance than their monetary or decorative value. The emphasis on identity might in part explain the limited distribution of Romano-British mosaics since they would be commissioned by those wishing to express a particular group identity (Hodder 1982). If this hypothesis is correct it would seem that ethnic identity was still of importance in Fourth Century Britain (Millett 1990, 176).

As the importance of municipal government waned in the later Empire, so did the incentive to invest money in public munificence. Instead, the controlling Romano-British elite elected to move to their rural estates and expend their wealth in personal display and their temples and villas, perhaps demonstrating the true extent of their Romanization (Millett 1990, 196). However, these actions are consistent with those of a controlling elite in a position to manipulate their lifestyles according to circumstances. This sentiment is articulated by Millett (1990, 212), "…Romanization has been seen largely as indigenous in its motivation, with emulation of Roman ways and styles being first a means of obtaining or retaining social dominance, then being used to express and define it while its manifestations evolved."

Roman artefacts – the evidence:

The excavations at Roman Alchester revealed seventeen sherds of pottery (from phased contexts) with evidence of riveting. This collection represented 0.047% of the sherds excavated, which demonstrates a very low incidence of detected repair in ceramic vessels. Twelve of the riveted sherds were from samian vessels, two were from grey ware vessels, a further two from grog-tempered storage jars and the final sherd from a colour-coated beaker base. The high proportion of repairs to samian ware is considered to be a normal distribution and the type of riveting representative of repaired samian vessels. Most of the samian from this site was riveted with lead cleats in contrast with the circular plug and lead strips method more frequently associated with coarse ware (Booth: 2001; 382). The higher repair rate in evidence

for samian ware is probably associated with the high status value of the product, which justified the effort of time and money expended on such repairs. (It could be argued that coarse ware vessels were for the most part more expendable, being readily accessible and relatively cheap to replace. Repair in coarse ware vessels is therefore more exceptional and should perhaps be studied so that the motivation for restoration can be established.) However the rate of riveting from Alchester is low when compared to other lowland urban sites, where Catterick has a rate of 0.16% and Alcester, 0.19% (Booth: Ibid). The riveting at Alchester is more comparable with the 0.08% from the rural settlement of Thornwell Farm in Chepstow (Ibid). A possible explanation for the unusually low rate of repair would be that the proportion of samian ware in the Alchester assemblage was relatively low for an urban site and more comparable in size to assemblages from rural loci.

Excavated tent panels from Roman Ribchester seem to demonstrate three levels of repair. The first category of repair probably pertains to damage at the tannery during the preparation of skins for artefactual use and is, in this case, of the least interest. Such repairs tend to be characterised by the careful stitching of patches (usually circular) to the front or back of a sheet to cover small holes or tears. An alternative technique was to over-sew the damage tightly (Buxton: 2000; 309). The second level of repair is associated with field repairs by the occupants of a tent damaged during use and is characterised by large or uneven stitches and sometimes tacking stitches to pull a tear together. As repairs these attempts were probably not especially efficacious. Finally there is the "professional" repair that can be recognised as the remedying of extensive damage by the removal and replacement of badly damaged panels or sections of panels (Ibid). Professional repairs could only be undertaken before or after campaigns, when the tents could be inspected for damage after periods of storage or dealt with on return from the field. The field repairs carried out by the soldiers could be regarded, on occasion, as interim measures so that the tent could continue in use for the duration of a campaign. According to Breeze (1994), soldiers owned their tents in common and these were an expensive piece of equipment that merited careful upkeep. The purchase of a tent was sufficiently expensive that in the event of the death of an owner the remaining soldiers repaid the deceased's investment to their heirs (Ibid).

Survey Results for Roman Culture

See Appendix 6 for definitions of the categories used in the charts.

Figure 5:1 is a chart depicting the range of object types conserved by Roman culture, representing one Aesthetic artefact (a Greek statue), with the remainder of the group comprising functional artefacts. Literature written about the Romans does allude to Roman repair of Greek statues, this has not been supported with sufficient information to be included in the survey system. Aesthetic artefacts are, therefore underrepresented here.

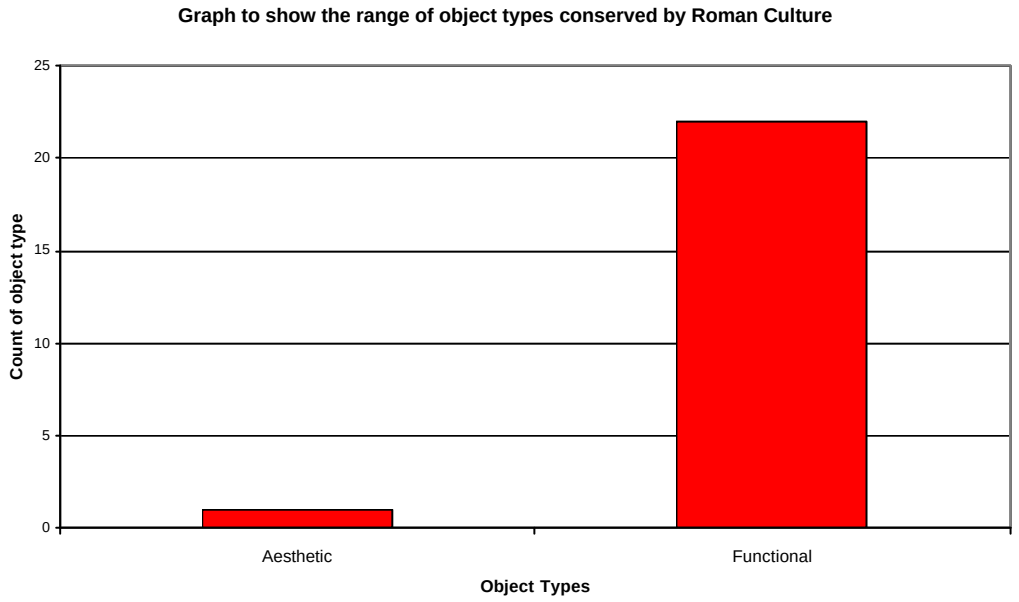


Figure 5:1

Figure 5:2 is a chart that reveals the range of reasons the Roman Culture has for preserving artefacts. The aesthetic object retains its value assignation, but some of the functional items take on cultural value and others, personal value. This is not to neglect mention of the artefacts that retain functional value – in this instance leather sandals and armour. These objects did not completely lose their functional value, but required repair to return the items to a higher level of functionality. The artefacts that have changed value attribution are broken Samian ware vessels that have been riveted to hold the pieces together; and broken brooches that have been mended and retained for personal reasons.

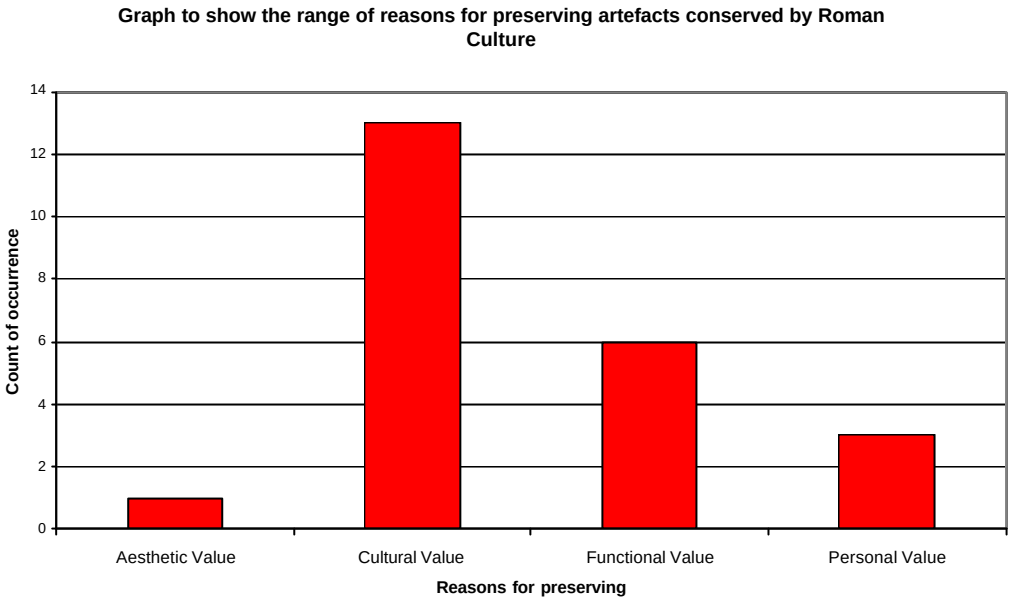


Figure 5:2

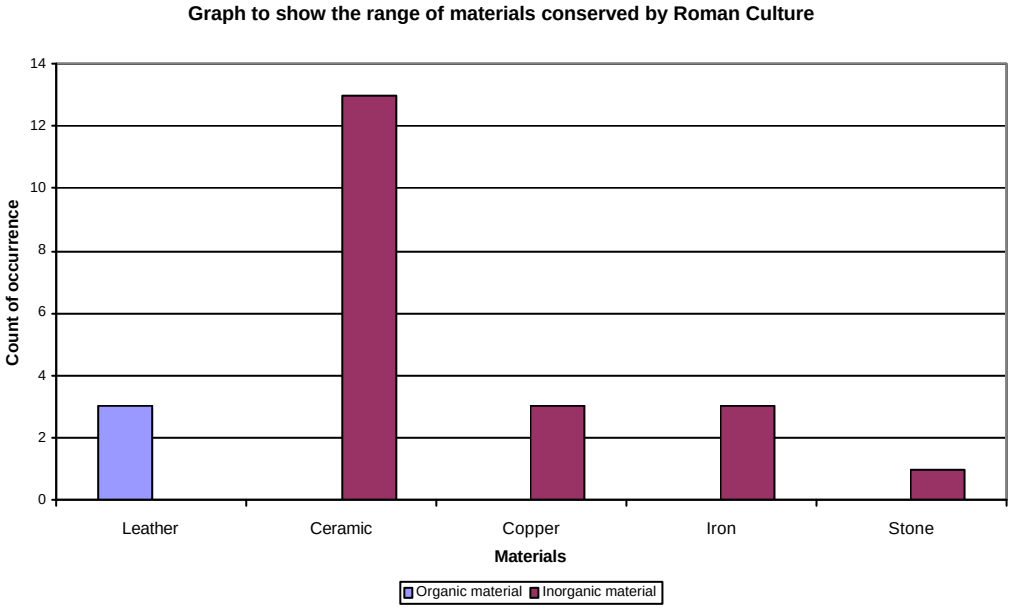


Figure 5:3

Figure 5:3 is a chart showing the range of materials conserved by Roman culture. The range of materials is limited, but not necessarily an inaccurate representation of the diversity that would have been seen in Roman material culture care. I have mentioned already that a greater number of statues were conserved by Roman

Culture, which would increase the examples of stone artefact conservation without increasing the range of materials conserved. The high number of ceramic objects conserved correlates with the repaired Samian ware. There are numerous literary references to repaired Samian ware and plentiful evidence for this trend in museum artefacts. Samian ware is fairly exceptional amongst archaeological ceramics, since it is an example of an aesthetic, functional object set, where part of the value of the objects is derived from their attractive appearance. These articles were expensive to purchase in relation to plainer contemporary vessels. The money paid for Samian ware is reflected in its appearance, which means that social contemporaries would appreciate the high value of the objects. This in turn adds a symbolic element, since the functional artefacts can also act as status symbols. Thus is why broken and repaired Samian vessels take on cultural value, since the often visible repairs seem almost deliberate, as if no status is lost through the repair, since the object can still be displayed and admired, if not "used" in the conventional sense.

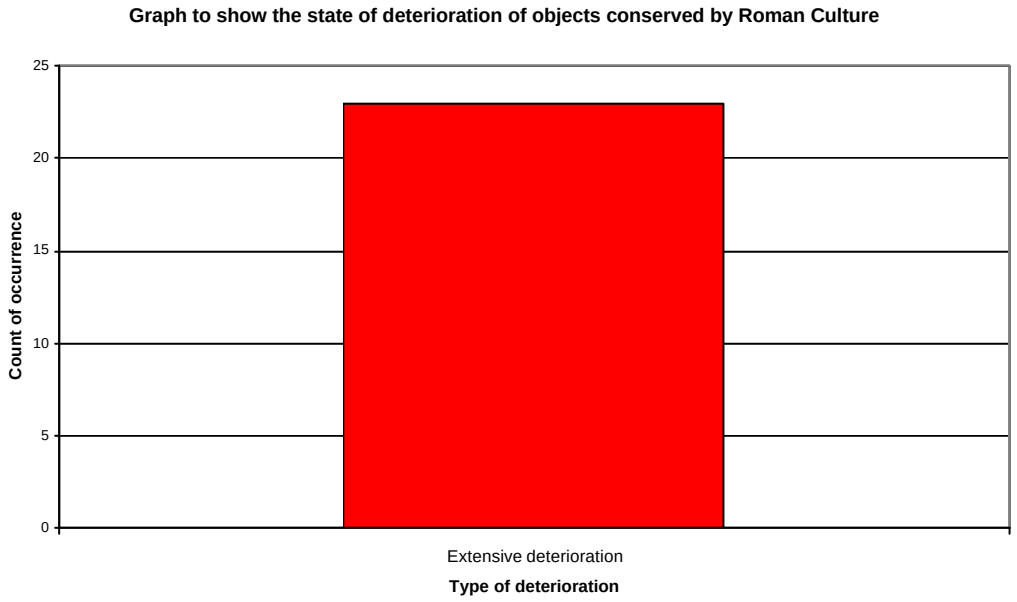


Figure 5:4

Figure 5:4 is a chart depicting the state of deterioration of artefacts conserved by Roman Culture. Every object in the set displayed extensive deterioration before conservation. The sandals and armour were highly worn or damaged, the Samian ware, brooches and statue, displaying breakage. What unites these artefacts is that

in most instances the deterioration denotes breakage or damage through use. Despite the extent of the damage the objects were considered valuable enough to repair, rather than to discard.

Figure 5:5 is a chart showing the balance of conservation techniques undertaken by Roman Culture. There is no evidence for the application of investigation or recording, but these factors are not integral to object care in Roman Culture, where it seems that the maintenance of appearance and functionality are paramount. There is also no evidence for the employment of

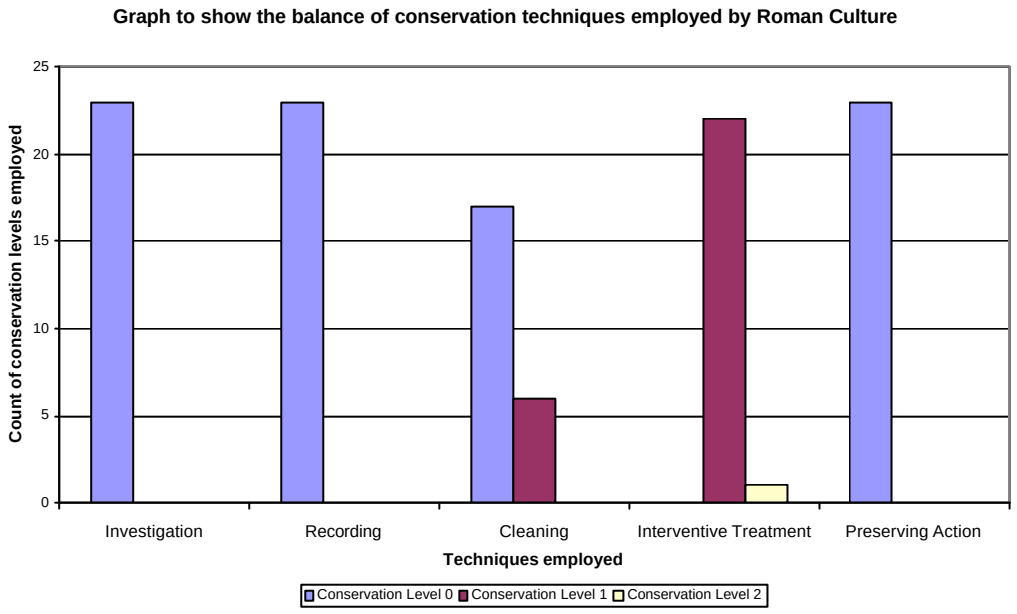


Figure 5:5

preserving actions. This is not unexpected if the cultural "philosophy" is to undertake repair whenever it is required. Some artefacts have been partially cleaned, but this was probably to facilitate the repair, which is the crux of Roman cultural artefact care - repair for the stabilisation and maintenance of the "use" of the object (interventive treatment at Level 1). The exception to this is the repair to the statue that is treated so as to attempt to restore its original appearance. The primary role of an aesthetic object, in this case a statue is to be visually pleasing, which is why the more extensive interventive treatment was applied.

CHAPTER 6

The Egyptians and their perceptions of material culture

The Ancient Egyptian culture spans over three thousand years of history encompassing periods of peace and stability interspersed with civil war and foreign conflict. Cultural changes over the course time, resulting from internal and external social and political divergence and, sometimes as a consequence, from shifts in geographical regions of primacy, are perhaps to be expected. However, despite the inexorable flow of cultural practice and perpetuation of cultural thought, there are fundamental elements of Ancient Egyptian culture that are recognisable throughout the majority of the era. Religion was a crucial component of Egyptian existence and influenced everyday life, affecting the Pharaoh, the rest of the royal family, the priesthood, scribes and common people alike. Religious practice, as an inextricable part of the cultural package, experienced alterations through the centuries, but the essential doctrine endured, uniting generations throughout three millennia.

To begin to understand the culture of the Egyptians it is crucial to place the data in context. The inhabitants of Ancient Egypt populated the length of the Nile Valley that owed its fertility to the alluvium deposited by the waters of its annual flooding. From the late Predynastic Period the South of the country, was referred to as Upper Egypt, receiving its epithet from the elevation of the ground towards the source of the Nile (Bierbrier:1999; 2). The North land or Delta region, by association, was Lower Egypt. Until the First Dynasty the two parts of the country were not politically united (Ibid), but in many future centuries the King, or Pharaoh, was known as the "King of the Two Lands". The Predynastic Period saw the inception of hieroglyphic writing, which was developed to be employed as tomb inscriptions in the Dynastic Period. It is known from inscriptions carved during the first two Dynasties that the King was identified with the sky-god Horus (Ibid). It became customary for the Pharaoh to be hailed as the son of the god, but the god in question did not remain the same throughout history.

The Egyptians acknowledged a pantheon of gods, among whom were a number of regional deities who enjoyed local support, a few of whom were elevated to national

status depending upon the area in which a new Pharaoh was raised. However, it is of note that the majority of gods to enjoy elevated positions possessed, or were bestowed with solar connotations. The sun was recognised to be the source of "light, heat and life [and was] worshipped from very early times" (Thomas: 1986; 19). A personified sun god was incorporated into the Egyptian creation myth that charted the movements of the sun across the horizon, alluding to the passage through life, and regarding each new dawn as rebirth. By the Third Dynasty the sun-god Re, depicted as the Sun Disk or a man surmounted with the Disk, supplanted the falcon-headed sky-god Horus in the affections of the Pharaohs. What had also changed was the location of the royal tombs, which in a few short centuries had moved from Abydos to Saqqara. Yet the new affiliation with Re did not affect the status of the King as the "son of god". Later Horus was absorbed into the god Re, to provide Re-Harakty and reinforce the deity's status (Thomas: 1986; 3).

An integral part of the belief system was the concept of the afterlife, which was presided over by Osiris, King of the Underworld. Our knowledge of the afterlife is provided through tomb inscriptions that document attainment of eternal life by surviving Judgement by the gods. However, it was not sufficient for the deceased to be judged as the bearer of a "truthful heart", since the afterlife denoted a physical existence. The soul of the deceased required its mortal body to prosper in the Hereafter, which led to the development of the embalming procedure frequently encountered in mummified bodies. It is unsurprising, bearing in mind the importance the afterlife held for the Ancient Egyptians, that there is an abundance of material culture associated with the worship of the gods (temples) and the resting places of the deceased (tombs). These often grandiose fabrications tend to reflect the realm of the royalty and priesthood. Material culture existed also for the common people.

A starting point for deciphering the material culture would seem to be to acknowledge that the Egyptian culture was drenched in symbolism. The written language form of the nobility – Hieroglyphics – comprised an array of symbols to represent words and sounds, concepts and objects. The glyphs were a form of pictograms where a symbol could depict the object represented, or a sound. For example a hieroglyph showing an owl could stand for an owl or the letter "M". This symbolism translated directly to certain artefacts, such as amulets. The symbol for a heart, derived from the

hieroglyph, was often fashioned into an amulet taking the same form and thus supplying a representation of a heart. The heart was believed by the Egyptians to be the seat of the conscience and of truth, and thus a part of the body that required protection for the afterlife. Heart amulets were often found around the chest area in wrappings from mummies and were believed to confer protection to this vital organ. It is known that the body was thought to be required in the afterlife, and so much effort was expended in ensuring its preservation. Despite these precautions, the Egyptians in their circumspection decided to ensure that there were contingencies, should some awful accident or curse befall the body while it was in the tomb. Shabti figurines were small, often mummiform statuettes fashioned from wood, pottery or faience that were traditionally placed in the tomb and entrusted with a multitude of tasks. Not only did the shabti act as guardians to the body, but they were potentially servants for the afterlife. The figures would be inscribed or painted with the name of the deceased and a passage from the Book of the Dead, which meant that they were answerable to the deceased and imbued with the power to undertake any tasks or chores in the afterlife that their master might ask of them. What is more, one of the shabti could provide a substitute body for their master in the unfortunate event that the body was destroyed. Therefore, it becomes apparent that certain symbols or representations in the Egyptian world held the power to become what they depicted. Perhaps one example that demonstrates the extent of the power of symbolism is the inscribed false door of the tomb, which is supposed to separate this world from the next. The door is inscribed with the name of the deceased and food and drink offerings for the journey to the afterlife. In this way, in the unfortunate event that some catastrophe should obliterate the body of the deceased, along with all the offerings, or representations of offerings, there would still be a hope of eternal life. This springs from the belief that the inscription of a person's name contains their soul, and so with a soul and the promise of sustenance (the inscribed) food, the deceased can still attempt to make the perilous journey to the Hereafter.

The importance of symbolism and representation in Ancient Egypt was extended beyond the tomb and into the realm of daily life. If, as has been inferred, an artefact can become something by virtue of representing that object, it would seem that if an artefact was to have the appearance of comprising certain materials, this should be enough to pass the object off as such. There are numerous examples of furniture and

jewellery that have the appearance of rare or precious materials, when in fact veneers have been applied (rather than solid sections) or the surfaces have been painted to emulate another material. There is a fine example of a stool from the tomb of Tutankhamen, which imitates in appearance a folding stool with a leopard skin seat. The legs of the stool, however, are firmly jointed and the seat is painted with the (slightly impressionistic) pattern of leopard skin (Metropolitan Museum of Art; 1976; Cat No.4) (see Figure 6.1).

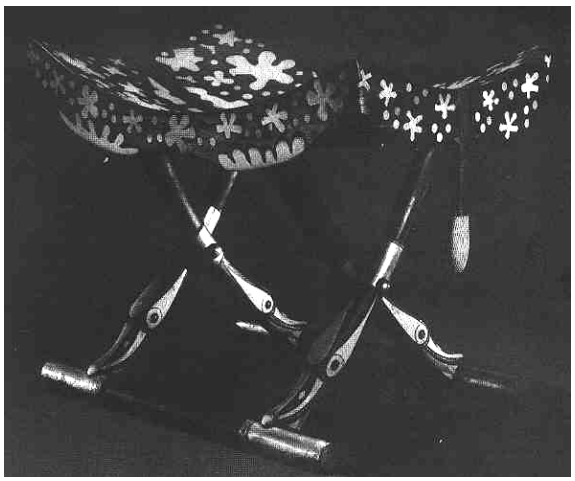


Figure 6.1: Stool from tomb of Tutankhamen

There might have been a number of motivations for creating an appearance of material or form. For example, if the material in question was rare or extremely expensive a superior artefact could be represented, with the aid of veneer or paint, without greatly sacrificing the appearance of the object. What is more, the sparing use of expensive or rare materials by employing veneers, seems to communicate a certain pragmatism. If the appearance is that of a solid ebony chest then there is no need to use more than a veneer on a more plentiful wood, thus leaving more of the rare wood for other artefacts. A similar example is that of unguent vases found in tombs. These containers would bear the inscription of the desired ointment, but be filled with mud instead of the precious substance. It would be considered sufficient that the name of the ointment was stated, without the need for the substance to be present. In this way the symbolic appearance provides for the deceased, whilst not depriving the living. It is, however, not only expensive and rare materials that are duplicated, but also those that are difficult to work, such as hard stone. Many unguent vases and vessels to contain high status materials were fashioned from stone. However, it took a great deal of skill and time to grind a vessel with sides so thin that they became translucent.

An alternative to using stone, therefore, was to form the vessel from clay, thus providing a lightweight ceramic body that could be painted to emulate stone.

Amongst the reasons for employing what could be described as deceptive appearances is political motives. Akhenaten, also known as a heretic King, for attempting to supplant the entire pantheon with the god Aten, ordered a number of statues of himself to be given a look which, while rather unnatural, gives the impression of extreme youth. This instruction was given after one of his jubilee celebrations. The Sed Festivals usually took place in the 30th year of a Pharaoh's reign and traditionally required the King to perform a number of strenuous physical tasks. Failure to complete the challenges showed lack of power and in early Dynastic times led to the execution of the unfortunate monarch. In later times the tasks were delegated to a champion athlete, and so the physical prowess of the King was less important. Yet if Akhenaten felt that he was beginning to age, his subjects might become less confident of his power or confidence. The new sculptures would send out a very different message and would act as reassurance to the people, thus helping to secure the throne. The emulation of appearance in artefacts is not restricted solely to the higher echelons of society, since the common folk of Memphis were known to use faience in place of semi-precious stones so that they could possess jewellery that looked similar to that modelled by royalty. There is a parallel with the use of costume jewellery in many societies today. The motivation in this instance is to achieve the appearance of something that is otherwise unattainable.

It could be argued that there existed religious motivation behind the treatment of certain artefacts. Statues were often considered to contain a certain life force or soul, especially when they represented humans and gods. Some statues even underwent an "opening of the mouth ceremony" that was usually reserved for mummies about to be transferred to their tombs. The purpose of the ritual was to allow the soul, disembodied during the embalming procedure, to re-enter the body. The same process applied to a statue would confer it with life. This might possibly go some way to explaining why broken noses and limbs were reattached to such artefacts, since it would improve their lives. It would demonstrate respect and piety if the depiction of a god was treated with such reverence. There is a joint statue of Amun (Amen) and Mut at the temple at Luxor. Mut, the goddess figure displays a

rectangular cavity where her nose would once have belonged. This suggests that it was replaced in antiquity, but subsequently lost. (See Figures 6.2 & 6.3).

Figure 6.2: Dyad statue of Amun & Mut at Luxor

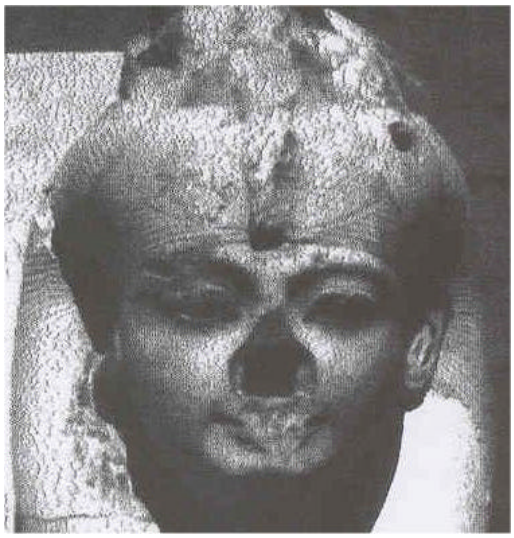


Figure 6.3: Detail of nasal cavity

Although genuine and apposite piety might be displayed through the restoration of statues, there might be further motivations for such action. Failing to repair statues, temples, tombs or public buildings might be construed as a sign of weakness by a King's subjects. It could suggest that there is a lack of money for maintenance or that the ruler is unaware of the state of cities beyond the capital, which could be construed as an insult to the common people. On the other hand, restoration of monuments would send an impressive message of power and prowess to the people and foreign dignitaries.

Architectural restoration

There are many examples of architectural restoration in Ancient Egypt, when repairs are undertaken on monuments or buildings during later reigns. Although it could be intimated that the motivation for these actions was a profound respect for the past it would be naive to accept this notion without further scrutiny. Political motives inspired Pharaohs to persuade their people that piety and respect had caused them to pursue the restorations, as in the case of Eighteenth Dynasty King Thutmoses IV. Thutmoses IV was a son of Amenhotep II and in later life went on to become Pharaoh, and yet was not first in the line of succession. His ascent to power seemed to be assured by his restoration of the Sphinx at Giza and the tale is recounted in the "dream stele" that Thutmoses IV commissioned to be placed between the paws of the Sphinx after the act of restoration. According to the inscription the prince fell asleep under the shadow of the Sphinx whilst on a hunting expedition. The prince then dreamt that the god Re-Herachty embodied the giant statue and asked to be freed from the sand that had built up around most of its body. In return for the favour the god promised that Thutmoses would become Pharaoh (Dunn: http://www.touregypt.net). Remarkably the prince did become King, but only after murdering his brother. This heinous acted seemed to be overlooked, however, because it was the will of the Sun-god that Thutmoses should be Pharaoh. This is perhaps an extreme example of restoration resulting from political motivation.

Later in the Eighteenth Dynasty is the reign of King Tutankhamen, who succeeded Akhenaten (also known as a heretic king). Akhenaten had altered religious tradition

in a radical way during his reign, renouncing the established pantheon in favour of the god Aten, represented as the sun or sun-disk. It was the first time that Egyptian religion had experienced monotheism and the trend did not endure beyond the end of Akhenaten's reign. However, in that time Akhenaten had moved the capital city to El Armana, building the new city of Akhentaten. Here temples were raised to Aten and envoys were deployed to Thebes and Karnak to erase the cartouches of the gods Amen, his counterpart Mut and their offspring, Khons, who were known as the Theban triad (Hari: 1985; 14-15). On his accession to the throne the prince, once known as Tutankaten, changed his name to Tutankhamun and ultimately commissioned a restoration stele, setting out all the work that was to be carried out to amend the damage caused by the previous incumbent (Hari: 1985: 16). It would seem that Tutankhamen's actions were led by piety and respect for religious tradition. It is important, however, to indicate the distinction between respect for past tradition and respect for material culture of the past. The fabric of the temples of monuments happened to be where the traditions had been embodied in inscriptions, but it could be argued that the information was what was especially valued, rather than the fabric of the buildings. The physical integrity of the artefacts was incidental; it was merely required to display what were considered to be the legitimate traditions.

Although contemporary politics and religion provided motivation for artefactual restoration, these were not the only reasons for repairing monuments. It would appear that respect for the past and its material culture was the inspiration for certain projects, even if this respect was affected by prominent individuals, rather than felt by the people as a whole. Khaemwese, a son of Rameses II, was one such individual. Khaemwese was not first in line of succession and never became Pharaoh, and yet still oversaw numerous restoration projects, thus seeming to reaffirm the motivation of past respect, rather than political gain. During his father's reign Khaemwese supervised the cleaning and repair of more than a dozen pyramids, temples, chapels, tombs and statues and clearly stated his inspiration by having an inscription added to a statue of an Old Kingdom prince: "so greatly did he love antiquity and the noble-folk who were aforetime" (Dunn: http://www.touregypt.net). This unequivocally demonstrates a reverence of the past. This is borne out by the fact that Khaemwese is regarded to be the first Egyptologist, having made surveys of the pyramids, temples and shrines at many of the locations around Memphis. His knowledge of Egyptian

history enabled him to identify a pyramid at Sakkara that had no external dedication and write an inscription of the incumbent's name, King Unas, thus allowing others an insight into their country's history (Ibid.). This appears to be a legitimate example of restoration occurring as a result of reverence for the past, but it pertains to items of a monumental scale, and so provides little insight into the restoration or conservation of portable antiquities or smaller artefacts.

There is a paucity of evidence for the restoration or conservation of artefacts, which gives the impression that objects were repaired infrequently for any reason. A rare example of an ancient repair is to be found in a small travertine unguent vessel (Oriental Museum, Durham), dated to the Old Kingdom, which had small holes drilled either side of a break line to receive rivets or ties to hold the broken halves together (see Figure 6.4).

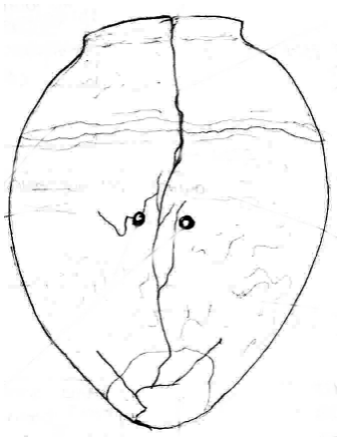


Figure 6.4 : Travertine vessel

Unfortunately the context of the artefact is unknown, and so it is not possible to establish at what stage of the object's history the repair was carried out. The extant evidence shows the repair is intended to align the two halves together retaining function. Stone unguent vases were recognised to be quite high status items and it could be inferred that the vessel was repaired because it was deemed too valuable to discard, but would have little value as a broken object. This does provide an example of high status or valuable artefacts which were considered, at some level, to be worth repairing.

Evidence for similar treatment of everyday items, on the other hand, is almost non-existent. One hypothesis that might explain the lack of repair witnessed in low status functional items is that the objects were considered to be replaceable and the broken shards of ceramic vessels, for example could be reused in new ways. The loss of a bowl through breakage could mean the acquisition of a number of note tablets or ostrica. In Memphis there is also evidence that the common people used pot shards to

fashion new items such as stoppers lids and gaming counters (Jeffreys: 1993; 19). Some reused shards were not modified in shape, but were used for note-taking, issuing informal instructions, writing invitations, letters and poems (Ibid.). These ostrica, as they are known, provide an invaluable insight into the life of the ordinary Egyptian, since they afford glimpses of everyday life. Here their value lies in what they reveal about people's attitudes towards material culture. It would seem that certain items, once broken did not merit repair, since the attainment of a new object was possible and there were benefits to be had from the reuse of the original material.

References to ancient or antique objects being retained by future generations of Ancient Egyptians are infrequent and require investigation in order to attempt to extrapolate why material culture from the past did not seem to survive. One approach that might yield clues is analysis of the treatment of artefacts in their cultural context.

There is evidence from Memphis that reuse, rather than repair seemed to be the norm for broken ceramic artefacts, which tends to be related to daily behaviour (cf supra). Yet the treatment of artefacts used by the common people at ritual occasions, such as funeral ceremonies and holy feasts is quite different. Piles of ceramic vessels were discovered at the necropolis at Dra' Abu el-Naga, items that were probably employed during celebratory feasts. The accumulation of material suggests that reuse was not occurring and it has been supposed that the artefacts were deliberately discarded (Polz: 1997; 34). It has been hypothesised that artefacts associated with religious ceremonies were sacrosanct and imbued with power and, as a result, could not be used again (Ibid.). There is an example, from the same site, of an occurrence of object reuse and subsequent discard. An assemblage of ten ceramic bowls (of various shapes and sizes) containing pigment, and paint brushes was excavated from a pile of limestone chips. These bowls represent forms that were in common use in the early New Kingdom period, and so were not expressly manufactured for use as paint palettes (Polz: 1997; 34). Many of the bowls displayed some damage, which appeared to have occurred before the bowls were used to hold paint, since there were significant traces of pigment on the break edges. Although the bowls were damaged their function was not impaired, allowing them to be reused as containers and precluding the need for repair. This in itself is not unusual, but the deliberate burial of these reused objects is more difficult to explain. The assemblage was discovered at a

necropolis, and so the bowls might have been associated with ritual celebrations in some way, thus making the further reuse of the objects taboo. Yet it is known that the palettes were not employed in the painting of the Dra' Abu el-Naga tombs, since these pigments are not represented there. However, the vessels might have been used to paint portable objects and small stelae that depicted food and acted as substitutes for offerings at funerary repasts (Polz: 1997; 35). It would seem likely, therefore, that the tools were ritually dispensed with because of the sacred power that they retained.

The notion of power in artefacts is worth further exploration, since it has the potential to explain why few antique objects tend to be found in future contexts, since anything with ritual associations could not be possessed. If this tradition was respected such objects would not pass into the hands of future generations. However, this hypothesis cannot fully explain the phenomenon of the antique-less future. It must be borne in mind that the Ancient Egyptians who aspired to the higher echelons of society and were buried in tombs were also buried with many of their possessions, since these would be required for a comfortable afterlife. Therefore, with the exception of instances of tomb-robbing, a great number of artefacts were taken out of circulation each time there was a tomb burial. The living would be obliged to live with a depleted stock of furniture or to fabricate more, of which the latter would seem to be a likely outcome. The lack of evidence for retention of functional objects in daily use is perhaps to be expected. Ceramic vessels used regularly are likely to succumb to an accident eventually and there is evidence that broken vessels were discarded and the shards, upon occasion, reused. The fact that people could afford to lose a number of artefacts through wear and tear and even ritual discard suggests that ceramic vessels were replaceable and, therefore expendable. This does not preclude the occasional vessel being passed between generations, should it remain intact. However, as an object distinguished by its functionality, loss of functionality would probably lead to discard rather than attempts at repair or conservation. The combination of these three hypotheses go some way to explaining why the Ancient Egyptians preserved so few artefacts from their material culture past.

There do exist examples of antique objects appearing in tombs, which might initially suggest veneration of the past. However, closer scrutiny of the circumstances in which these artefacts have been found might reveal other reasons. Canopic vases,

dating to the New Kingdom, have been discovered in the later Twenty-first Dynasty tombs (Goff: 1979; 120). The vessels used as canopic vases were in fact alabaster jars the use of which had been usurped to provide a home for the organs of a mummy. There are a number of possible explanations for this occurrence. Stone vessels tended to be regarded as high status objects and were possibly retained because they had a high value. This in itself would ensure the preservation of a number of artefacts. However there is also scope for personal beliefs and values to influence the retention of material. An individual might develop sentimental attachment to an artefact or display an interest in or respect for the past that leads to an artefact passing between generations. It is rather difficult to find evidence to support which claim might have predominance. Despite this impediment it is quite clear that neither proposal provides an explanation for why antiques such as stone vases often surface in tombs, where they can no longer be appreciated by the living. The two main alternatives demonstrate a diametrically opposite regard for antique artefacts. On the one hand the artefact might be chosen to be part of a tomb assemblage because it was valued and could be enjoyed by the deceased in the afterlife. On the other hand the object might no longer hold value or use for the living, but does not merit being discarded. Such an artefact could be employed as a tomb offering, such as the jar that were a substitute for deliberately manufactured canopic vases, thus satisfying the needs of the living and the dead. From the outset a respect for the past could be inferred, but it is not as easy to suggest the same for the second. Although the evidence is minimal, it could be argued, in instances where the function of antiques is adapted in tombs, that such use does not reflect a respect for the past.

Brief mention has been made of the ritual discard of certain artefacts (funerary vessels) and the deliberate destruction of others (cartouches of the Theban Trinity in Akhenaten's reign), all of which is associated with the power of the objects. Such power can instil in people a sense of respect for the appropriate traditions and artefacts, but the potency could also affect the manifestation of fear. This fear can lead to the destruction of objects that are perceived to pose a threat to the living, such as the statues, temples and cartouches of deceased Kings. It was perhaps a concern of reigning monarchs that the living (soul containing) representations of dead predecessors might still hold sway from beyond the grave. Destruction of such "vessels" would greatly reduce any threat to a contemporary monarch's authority. In

a curious way this does suggest a certain reverence of the past. The religious and social traditions prove themselves to retain merit, otherwise the destructive impulses would not be inspired by fear.

There are examples of temples and buildings in Akhentaten being destroyed after the reign of Akhenaten. These actions might well have been inspired more by practicality than by fear, since Aten became a redundant god and the stones of the temples dedicated to him could be usurped and employed in buildings in other parts of the kingdom. Practicality can also be tinged with reverence, however. During the reign of Rameses II the Pharaoh instructed architects to reuse stones from a Ptah shrine erected in the reign of Amenhotep II and incorporate them into the chapel wall of his Ptah temple in Memphis (Johnson: 1996; 5). Although these actions might sound sacrilegious Rameses II might have perceived the situation in a different light. Blocks were required for his temple complex and reusing stones from another building would preclude time consuming quarrying. What is more, there would have been no conflict of interest, since the new temple was to be dedicated to the same god and the old stonework would retain the power invested in the original inscriptions to the god. It could be argued that the new temple would be more powerful than the original shrine, since it would have more inscriptions than before. In this way reverence to the past is demonstrated again through destructive action. However, what should be remembered is that what might be perceived as destruction today would not have been regarded as such by the Ancient Egyptians. The dismantling of a shrine might remove the original artefact from existence, but it did not quash the power of the component parts. In fact the essence of the stones remained, which was what the Egyptians regarded to be important. Therefore, even through seemingly destructive behaviour the Ancient Egyptians could still demonstrate reverence of the past.

Conclusion:

Much is known about the manufacture of artefacts in Egypt, but far less is known about their perceptions of their material past.

Although the Ancient Egyptians demonstrated reverence towards their own material culture past, for example in the restoration of statues, there are probably very good reasons why there is little evidence of preservation of artefacts. Clues can be found when analysing the contents of tombs. When objects were placed in a tomb they would be in perfect condition, which explains why there are generally no contemporaneously repaired objects found in the tombs.

Physical representation is regarded to be the ideal situation, but should the concrete object be damaged or destroyed this does not mark the eternal demise of the artefact if there remains so much as a hieroglyphic inscription denoting it. In other words, if there is a record of the existence of something, the essence of that phenomenon endures.

Throughout the numerous periods of change that occurred in Ancient Egypt, there is an appearance of continuity in content and style sustained through traditions and artefacts; however this was in effect a façade only giving this appearance of continuity. What is more, it was not important that this was anything more than a façade.

Survey Results for Ancient Egyptian Culture

See Appendix 6 for definitions of the categories used in the charts.

Figure 6:5 is a chart depicting the range of objects conserved by Ancient Egyptian Culture. The artefacts in the set are mainly cultural, with a few examples of functional items. This balance seems fairly consistent with other evidence pertaining to Egyptian conservation behaviour, since broken functional (low value) objects were often discarded, with the reuse, where possible of the fabric. There is more evidence for the repair of cultural objects, many of which were related to religious beliefs and were considered to possess high value.

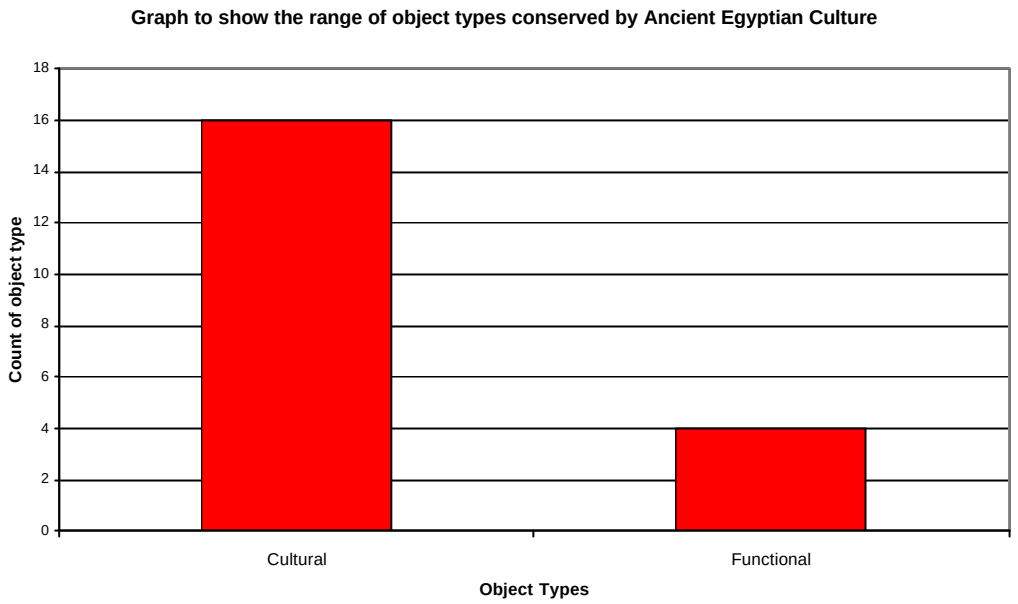


Figure 6:5

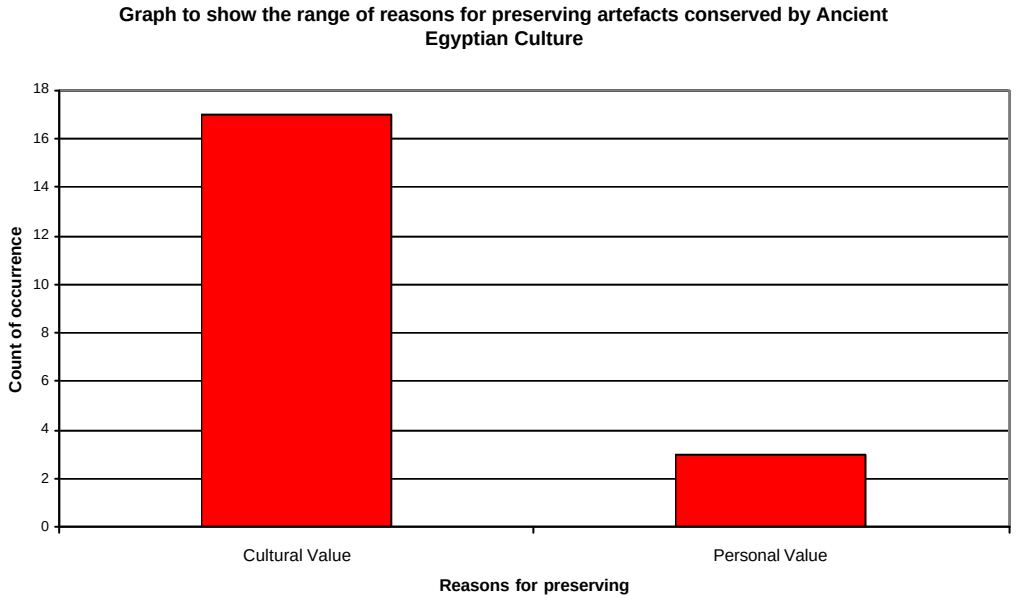


Figure 6:6

Figure 6:6 is a chart showing the range of reasons Ancient Egyptian Culture has for conserving artefacts. The division is between cultural value, which accounts for the majority if the objects, and personal value. All the cultural objects (previous chart, **Figure 6:5**) retained their cultural value, probably because the artefacts and "conservators" were part of the same cultural tradition. The functional objects, by contrast were transformed with either personal or cultural value. The functional item that achieved cultural value was a stone (travertine) vessel that was broken in two and repaired so that the halves were held together by

some manner of tie that would have passed through holes drilled in the vessel wall. The object was probably preserved, because it was a high value functional piece, fabricated from a stone that was hard to carve. The object was probably functioned as a status symbol, as well as a working object. When the functionality was diminished the artefact was retained, since it could still be used for display. The remaining re-valued functional objects were broken ceramic vessels that were repaired by means of ties passed through drilled holes. These vessels would have been of lower financial value than their stone counterpart, but were still repaired, despite the fact that broken ceramics tended to be reused. For this reason they were assigned personal value, since they probably possessed high value to individuals.

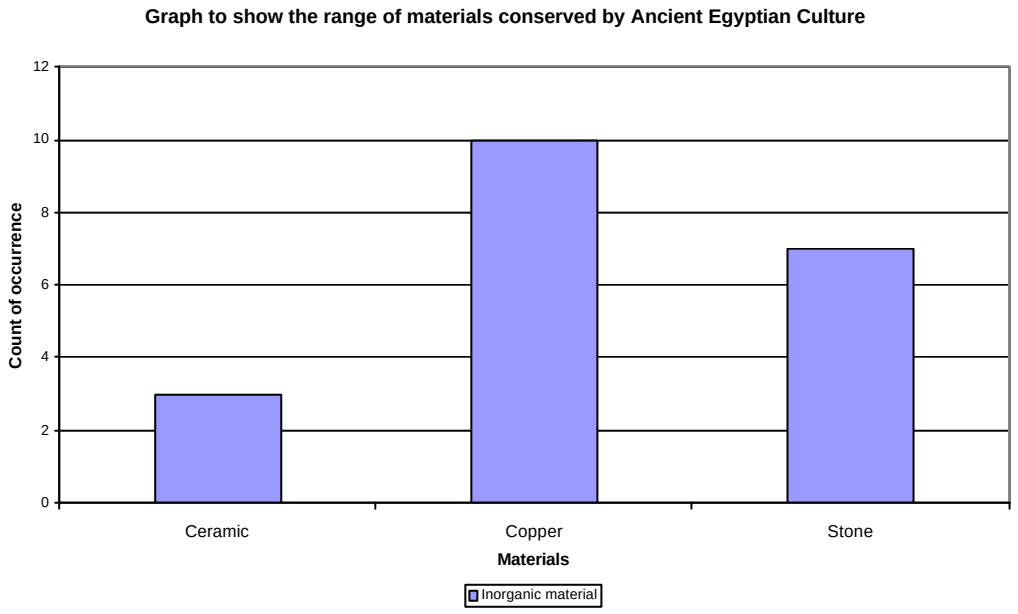


Figure 6:7

Figure 6:7 is a chart depicting the range of materials conserved by Ancient Egyptian Culture. The materials present are all inorganic, which is a result consistent with expectations. The Egyptians tended to conserve cultural objects, many of which were manufactured from durable, inorganic materials, since there was an expectation for such objects to endure the test of time. Many everyday functional items, which were usually remade, rather than repaired, would have been made form organic materials, hence their absence from data set. The high presence of copper and stone is the result of statue and statuette preservation.

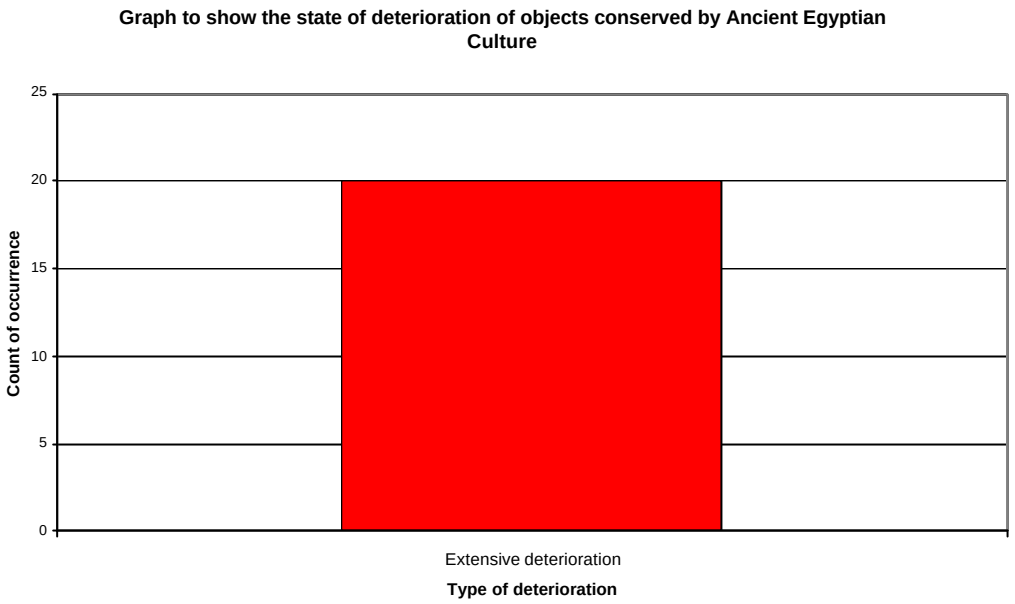


Figure 6:8

Figure 6:8 is a chart showing the state of deterioration of the artefacts conserved by Ancient Egyptian Culture. All the objects preserved display extensive deterioration. In this instance the impression given by the term may be slightly misleading. The objects all displayed damage or deterioration consistent with the definition given above, but the evidence tended to point to the minimum amount of damage that pertained to the category. For example, small limbs could be missing from statues, but from a distance the damage may not be perceived as major. The repair of artefacts, therefore, would not necessarily have been as extensive as imagined, but the work would have been labour-intensive, since mending stone and metal statues would have been a time-consuming affair.

Figure 6:9 is a chart showing the balance of conservation techniques applied by Ancient Egyptian Culture. There is no evidence for investigation, recording, cleaning or preserving action, which is fairly consistent with what is known about the culture. Tutankhamen was believed to have had the restoration of certain temples written about, but records pertaining to artefact

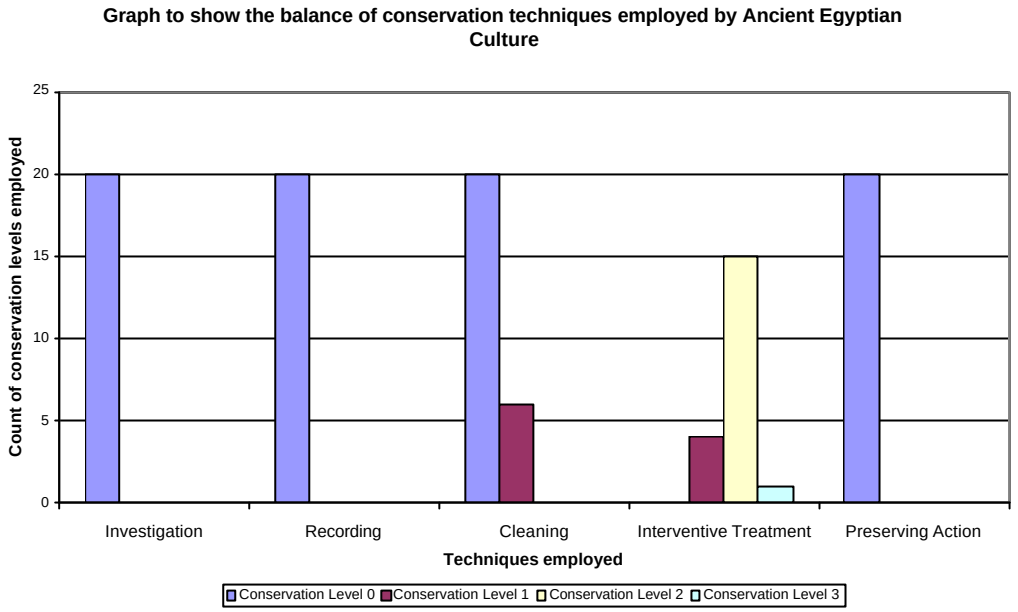


Figure 6:9

conservation were not made. Level 2 interventive treatment, which refers to the restoration of original appearance to an object, is the most prevalent approach taken. This is because it relates to the repair of statues, the appearance of which were deemed important, since it was believed that these representations of people and gods contained a small amount of the soul of the being depicted.

Chapter summary

What is conserved :

Objects created for their cultural role, such as statues and figurines, represent the majority of the objects conserved by Ancient Egyptian Culture. The remaining items are functional, for example repaired ceramic vessels.

Why have the objects been conserved?

Most of the objects were conserved because they retained high cultural value, thus meriting the conservation effort required to repair damage. The ceramic vessels were conserved for personal reasons, since they lost their functionality, but were still retained.

How have the objects been conserved?

There is evidence of some limited cleaning in the conservation of this artefact set, but the most prominent action is the interventive measures taken to restore the

visual appearance of the statues and figurines – this is a form of aesthetic conservation.

CHAPTER 7

The handling of material culture amongst the Native American Indians

Introduction:

The title Native American Indian encompasses many different nations and tribes of aboriginal peoples in North America, from New Mexico in the South right up into Canada in the North. Many are familiar with the Indian espoused by Hollywood – a tomahawk-wielding, tepee-dwelling, buckskin-clad horse rider. Although this is a stereotypical conflation of identities it is based ostensibly upon the image of the Plains Indians. Although various Plains tribes became renowned for their equestrian skills it should be noted that these famous horses were introduced by the Spanish in the sixteenth century, and so had not been, until latterly, an integral part of these ancient people's tradition. Yet it is important to recognise that the culture of the pre and post contact Native Americans was not static and that the incorporation of skills, traits and material culture from different social groups has been an important part of the tribal dynamic. Addressing the First Nations on a pan-American scale it is true that cultural traits and changes are easier to pinpoint in the post European contact era, since adaptation and later acculturation was documented by traders, settlers and ultimately ethnographers. Before European intervention the Native Americans were pre-literate and employed oral dissemination of myths, histories, religious observances and life instruction.

Religion amongst the Native Americans:

Religion plays an integral role in the lives of Native Americans, since it is inextricably bound to diurnal living. Before Christianity was brought to the shores of America the aboriginal peoples, across the continent, placed their faith in an animistic and animatistic belief system. Although the expressions of belief varied slightly between tribal groups the underlying concepts prevailed. Animism is the belief that natural objects, phenomena and ultimately the universe itself have desires and intentions, which are manifested in spirit form. Animism complements animatism, whereby inanimate objects are believed to have consciousness, which is also regarded to be a spirit or soul. Over the centuries each tribe has developed the mythology that

accompanies their beliefs and usually includes deities that are pivotal to the creation myths. Creation myths tend to document the emergence of a group in their sacred homeland and similarities between myths tends to suggest a shared or proximate past and sometimes similar environments. It will be revealed how the habitat of the groups affects the players in myth and it will be demonstrated how religion affects the production and treatment of material culture belonging to the Native Americans.

The Native Americans have populated all regions of the territory now recognised to be the Unites States of America. In order to highlight some of the differences and similarities in religion the Southwest has been selected as an example, since its subtle environmental variations have accommodated tribes with very different lifestyles. The Southwest of North America comprises New Mexico and Arizona and stretches west towards the Nevada and South California deserts and north to Utah. The terrain is varied and incorporates mountains and canyons, through which major rivers, such as the Rio Grande, San Juan, Gila and Colorado run. However the tributaries of these water sources are often dry and rivers, in their deep canyons, inaccessible. With a low annual rainfall to the region the area is classified as semi-arid – a situation that has affected the lifestyle and material culture of the native groups that inhabited the Southwest (Hunt: 1997; 8).

By 600AD the Hohokam and Anasazi, ancestors of modern Southwestern tribes, had succeeded in establishing a habitable environment in the desert by digging a network of irrigation canals that afforded the groups around 250,000 acres of land viable for cultivation (Ibid). Cultivation is invariably accompanied by a sedentary lifestyle, which is attested to by the nineteen pueblos (towns) and tribal groups that emerged throughout the region. The religion of the Pueblo tribes shares a number of similarities. A fairly universal belief is that Pueblo peoples emerged from a series of underworlds, often numbering four, which were each assigned a colour: white, red, blue and yellow. According to the people of the Santo Domingo pueblo the emergence into this world occurred at the "Centre of the World," or Shipap. Iatik (Mother of All) one of the creative gods was the only being permitted to remain at Shipap, while the humans were compelled to enter the modern world which materialised through the imaginings of Thought Woman. These deities instructed priests in how to harness the forces of the natural and supernatural worlds in order to

foster a sustainable agriculture in a region of limited rain. The deities also imparted that upon the demise of people the dead would return to the underworlds to be reborn as Shiwana – Rainmakers. This creation myth, like many espoused by various Native American groups, is pertinent to the environment in which the people live, providing guidance for survival in whichever environment dominates and direction for ceremonies of thanks and propitiation that will help to ensure continued survival (Hunt: 1997; 11).

When the Spanish arrived in the Southwest in the mid sixteenth century strenuous attempts were made to convert the Pueblo tribes to Christianity. Catholicism was often adopted, but as an addition to traditional religious practices, rather than as a replacement. There was no contradiction from the perspective of the Pueblo tribes, since Christianity could enrich an already eclectic religion that had been influenced by neighbouring native groups. Moreover Christianity did not contradict the tenets of animistic / animatistic belief and provided supreme beings to supplement existing pantheons. God could be regarded as Creator in the White Man's creation myth. Yet the Spaniards were unprepared to accept the conflation of the religions, since the monotheistic nature of Christianity precluded its admittance. Yet despite torture and retribution the Pueblo dwellers resisted the repudiation of their traditions. In the passing of four centuries the environment in the Southwest has altered little and the importance of the rain-bringing ceremonies has not greatly diminished. A fact that perhaps is unsurprising when it is considered that approximately one third of tribal income is derived from agriculture (Hunt: 1997; 12).

The Kachina cult is a prominent part of the religion of the Zuni and Hopi Pueblo tribes. The Kachinas are believed to be Rainmakers in the form of returned spirits of the deceased and masked dancers representing Kachinas are present in villages for six months each year. For the Hopi the Kachinas emerged from the underworld as rainmakers, along with other people. When people were disrespectful towards the Kachinas they departed, but promised to return each year to bring rain and wellbeing of the people. Amongst the Zuni the major Kachina ceremony is Shlako, which re-enacts their emergence myth. Along with the masked Kachina dancers are masked Koyemshi, or mudheads, who perform as clowns to remind people of their imperfections. During Powamu, the Bean Dance and the first major ceremony of the

Zuni Kachina season, the Kachinas tour the pueblos and distribute gifts to children below the age of initiation, which include: Kachina dolls; bows and arrows; rattles; moccasins and plaques (Hunt: 1997; 16).

The Apache migrated to the Southwest from sub arctic regions of Canada, establishing themselves shortly before the Spanish incursions of the sixteenth century. The Apache tribes brought with them a well-developed trading and hunting culture, which necessitated an existence of continuous movement, which was in stark contrast to the more sedentary existence of the cultivating Pueblo groups. Despite the divergence of the lifestyles traditions were still shared between the Southwestern tribes (Hunt; 1997; 9).

The Apache creation myth is based on the concept of giving life (rather than bringing destruction and death). For this group the world was created by Ysun, "the Giver of Life" and assisted White Painted Woman, who had existed from the beginning and her two sons / brothers the Twin War gods: Child of Water and Killer of Enemies. The twin gods rid the earth of monsters and forces that threatened the existence of people. The end result was a country imbued with the life-giving forces of sun, moon, thunder and lightening. However there was imperfection in the world and death, adultery, gluttony and thievery were introduced by the Trickster figure of Coyote. In order to deflect the negative conjurings of Coyote Ysun created the Water and Mountain beings, but was unable to dissipate all the negative influences. He Who Controls Water was a beneficial helper, but his counterpart, Water Monster, only imparted positive qualities if not angered, otherwise he could become unpleasant and responsible for deaths by drowning. The Mountain People, or "Gans" are equivalent to the Pueblo Kachinas – dwelling amongst the people, but fleeing to the mountains to avoid the sufferings inflicted by Coyote. White Painted Woman instructed the Gans to return each year, as healers, during the puberty ritual of Apache girls and anyone treated by a girl under the influence of the Gans will enjoy a long and happy life (Hunt: 1997; 26).

The Navaho were an Apache group living in an abandoned Pueblo known as "Navahti" or "Great Fields", who diverged from the Apache by adopting influences from tribes with whom they came into contact (Hunt: 1997; 27). As a result they

acquired skills in weaving, pottery, jewellery making and farming and they became nomadic sheep-herders (Hunt: 1997; 29). The weaving and sheep-herding were interrelated, since the Spanish introduced sheep to the Southwest and it was the sheep wool that was woven into blankets. Navaho myth is an integral part of Navaho culture and incorporates a central creation myth. Here Dawn Boy, child of First Man and First Woman, designed Navaho territory by placing sacred mountains at each cardinal point. To the East was a shell mountain; to the south a turquoise mountain; to the west a mountain of abalone and to the north a jet mountain (Hunt: 1997; 30). The people emerged from a hollow reed on Tsichlnaodichcli, a striped agate mountain at the centre of the Navaho world. Before the mountains were named the Holy People sang songs of their journeys and these Holy Songs, or Hozhonji were given to the people to use before the start of a journey; for protection against evil; to appeal to deities and to end all ceremonies (Ibid). Singing Hozhonji makes people blessed, pure and holy – like the mountain. Holy Songs are often sung at complex curing rituals that can take days to complete. For the Navaho it is essential that the songs are performed perfectly, since any mistake in either ritual or singing would render the cure ineffective (Ibid). Sand paintings are often used in curing rituals and are diagrammatic drawings that depict the myths to which the songs refer and are created on the ground with coloured sands. The patient is seated on the sand painting and any illness is transferred to the painting from the patient. The painting is then destroyed, which dissipates the negative forces and restores balance and harmony – the desired outcome of all Navaho ceremonies (Ibid).

The Pima and Papago, descended from the successful agriculturalist Hohokam, are known as circum-Pueblo tribes. The Hohokam diverged in to the Pima and Papago when their economy was destroyed by a combination of violent raids and prolonged drought. Both descendant groups have a history of non-aggression and subsist on limited agriculture that is supplemented by hunting and gathering (Hunt: 1997; 23). The Pima are able to rely upon the supply of the Gila River, and so can depend upon a number of stable crops. The Papago, by contrast, have no access to permanent water resources and rely on flash floods between the spring and autumn to water their crops of hardy desert plants, such as the mesquite bean and saguaro cactus. Both groups have elaborate rituals which are employed to bring rain, and so with water considered

to be such a valuable resource it is the medicine men who can influence the weather that are considered to be the most powerful (Hunt: 1997; 24).

The Pima and Papago have similar creation myths and the Papago believe that the world was created by Earthmaker (L'Itoi) and Buzzard and sewn together by the Spider People. However the first creation was imperfect, which led to a disagreement between L'Itoi and Coyote, which resulted in a flood that destroyed the first people. L'Itoi then went underground with Wind, who encouraged Gopher to burrow through the earth to create a hole through which the Pima and Papago could emerge. They passed through four underworlds before emerging into the desert and driving out the Hohokam to establish themselves in their place (Hunt: 1997; 23).

Perceptions of the past:

The manner in which the Native Americans relate to their past is bound up in their religion, which is disseminated in oral narratives and often referred to as oral tradition – a vital medium for pre-literate societies. When delving into the past of such social groups the archaeological record is often probed for clues about religious practices, customs and use of material culture. According to Jones (Junior) (1999: vii): "In the absence of letters and of recorded memories most easily does one wave of human life sweep over another, obliterating all former recollections save such as are lodged in the womb of mounds, or preserved in the generous bosom of mother earth." However, this sentiment is dismissive of the potency of oral tradition and invests too much confidence in the archaeological record providing a complete and unbiased picture from a specific point in time and is a slightly naïve viewpoint that should not be accepted without criticism. Burial mounds do not necessarily reflect the complete assemblage of artefacts from diurnal living , and as such can provide only a partial history, which can be supplemented by oral tradition. Schoolcraft does at least acknowledge the import of oral tradition amongst the Native Americans: "Aboriginal history, on this continent [of America] is more celebrated for preserving its fables than its facts. This is emphatically true respecting the hunter and non-industrial tribes of the present area of the United States, who have left little that is entitled to historical respect" (Schoolcraft, 1851 : 13). Yet he is shockingly dismissive of the First Nations' impact upon American history. Not only have the Native Americans stamped an indelible mark on the history books of the United States, but they have

ensured that their own history, told in its inimitable fashion, is disseminated to all generations of their own people.

It is known that the Navaho were influenced by the cultures of neighbouring groups and that they learned weaving, for example, from the Pueblo groups, but soon adapted it to distinctive Navaho styles (Hunt: 1997; 32). Myth was incorporated into the woven designs and patterns and weaving incorporated into myth. It is said that Spider Woman taught the Navaho to weave and her weaving employed lightning and sunbeams, and every subsequent blanket is said to reflect this concept (Hunt: 1997; 30). As collectors' items and examples of tribal art Navaho blankets are sometimes displayed on walls. This two dimensional display was never how the blankets were intended to be seen, since they were made to be worn, thus animating the designs and creating three dimensional art. In a similar way the turquoise and silver jewellery for which the Navahos are famed was an even later introduction, with silver-working learned from the Mexicans around 1850. In a matter of twenty years the Navaho had developed a unique jewellery style and referred to it in myth, with the gift of turquoise bestowed on the tribe by Changing Woman (Hunt: 1997; 30).

These particular myths can be dated with a high degree of accuracy, having been corroborated with Western history, and are relatively modern; and yet they give an impression of timelessness. It could be argued that perception of time is a cultural construct and to focus on this would be to digress from what is relevant here. The Navaho have recognised important developments in their history and have immortalised these in myth, so that the essence of the information can pass between generations. When the events actually occurred is less important than the fact that they did and it is this information, albeit couched in culture-specific references, that endures. Mythology proves that the Native Americans value their past. It could be inferred that it seems to be past actions that are valued more highly than material culture from the past.

Material culture in the tribal setting:

Each tribe had possessed its own distinct material culture, social mores, sanctions and religious beliefs, despite certain regional similarities. Attempts by the European settlers to acculturate the aboriginal peoples and convert them to Christianity

threatened to quash the traditions of the Native Americans. The established ways of life of the First Nations were not only undermined by European pressure to make radical alterations, but by the devastation of European diseases, such as small pox, which cut swathes through the various populations. Despite such adversity many tribes managed to resist wholesale change and retain the important vestiges of their identity, such as religion and material culture.

Attitudes towards material culture differed between groups and were often influenced by circumstance. The Southwestern Cocoa, a Hoken-speaking group whose present generations reside in Summerton, Arizona, demonstrate a cultural antipathy towards personal wealth. This outlook was fostered by the environment of their traditional homeland that was in close proximity to a river. Periodic flooding of the river bed meant that loss of personal possessions was a likelihood, making what would be the transient acquisition of material culture a fruitless pursuit (Westhorp & Collins: 1993; 20). The importance of material wealth seemed to be given less emphasis amongst nomadic tribes such as the Apache, since the impracticalities of transporting bulky or heavy goods unrelated to survival overruled any desire to accumulate such goods. Northwest Coast groups, who by contrast led a relatively sedentary lifestyle, such as the Pueblo tribes, were in a better position to acquire and display possessions as symbols of status and wealth. However, religious and ritual artefacts, to whatever extent they existed in each tribe, were always regarded with respect and handled according to strict taboos, since these were objects of enormous power, the misappropriation of which could lead to illness or death.

The power of artefacts refers to the animatistic spirit or soul with which the creator of an object imbues the item. All artefacts are animated with the spirit of the manufacturer, but some objects hold more power than others. Examples of powerful artefacts are religious paraphernalia, created by shamans or initiates who are themselves powerful, or items that are very labour intensive, such as blankets, where a person invests a lot of themselves in the artefact. The power associated with material culture meant that the use of artefacts was governed by taboos to protect both the creator and other users. On the one hand, since an artefact was intimately linked with the soul of its maker, use or misuse by a third party could potentially harm the owner.

On the other hand powerful artefacts could only be wielded by someone of a similar psychological or spiritual disposition to the maker, otherwise they might be harmed.

This might go some way to explaining why in California, along with other regions, the manufacture of artefacts was divided according to gender. Women tended to be responsible for the fabrication of baskets and clothing, whilst men undertook woodworking, the fashioning of items from bone, stone, shell and horn and the manufacture of luxury items (Wallace: 683). Ostensibly women made artefacts that they would use, as did the men. This meant that there was little craft specialisation, with perhaps the exception of highly skilled tasks, such as the chipping of obsidian arrow points, where a Pomo craftsman might be in demand for his skills (Loeb: 1926: 179). Personal possessions tended to be owned by the person who had produced them, who automatically had the right to dispose of them at will. Often possessions would be distributed, upon the demise of the owner, to those who could make use of them, and so a man's valuables, weapons and tools would pass to male relatives and items used by women, to their female relations. Many tribes simplified matters by the custom of destroying or burying most of the deceased's artefacts (Wallace: 687).

Functional artefacts:

Analysing Native American care of artefacts is fraught with difficulties, since there is a paucity of evidence for old functional artefacts. Yet it is possible to postulate a number of reasons for this occurrence. Nomadic tribes would not tend to accumulate large assemblages of artefacts due to the logistical problems of moving the material culture from place to place. In addition many objects for everyday use would have been manufactured from ephemeral organic materials that might wear out through use or would not survive well in burial environs. Furthermore it should be borne in mind that many artefacts were destroyed upon the demise of the owner. In California Pomo mortuary practice up till the last decades of the nineteenth century revolved around the burning of the deceased, along with the most valuable possessions of the dead (Culin: 1906a; 44 cited in Jacknis: 1991; 173). Similarly Mohawk burial from 1580 onwards began to be accompanied by a large volume of grave goods, much of which comprised relatively new European trade goods. The Mohawk explained the aetiology behind this somewhat surprising practice to contemporary Jesuit missionary

Le Jeune. European goods were new to the Mohawks, which meant that for the deceased to be well supplied and to benefit from the innovations in the next world these would have to be buried. There was already a surfeit of traditional craft items in the next world, so burial of such artefacts was not a priority (Snow: 1994; 90). For the Native Americans the spiritual afterworld was not only an extension to terrestrial existence, but a plane of existence that could impinge upon the realm of the living. It was well to please the deceased, since in some cultures they would return as rainmakers who would assist cultivation by ensuring plentiful supplies of otherwise limited water. In some instances deceased ancestors could visit misfortune, illness or in extreme circumstances, death, upon living relative who displeased them by failing to supply suitable or bountiful gifts for the afterlife. It therefore made good sense to provide generously for deceased relations.

Archaeological evidence can attest to a similar burial tradition of Atlantic coast Native Americans in prehistoric times. Decorated tools manufactured from Ramah chert, greenstone or copper – valuable materials acquired through long distance trade – were "killed" by being broken in half shortly before interment, thus releasing the spirit of the artefact and enabling the deceased to wield the tools in the afterlife (Abbott, Craig, Le Bas: 1993; 108). Here the use of valuable trade materials suggests the respect or deference with which the deceased were regarded. It demonstrates that perhaps the best goods were reserved for the afterlife. It is also of interest that artefacts were deliberately broken before burial. By "killing" the objects they released their spirits and the artefacts ceased to possess any functional value to the living. However, the seemingly destructive act of breakage served to transform ordinary functionality to extraordinary, or supernatural, functionality, which enabled the objects to continue use in the spiritual plane.

When living on the margin of survival in harsh environmental conditions it was important, if not essential, to attempt to maintain the status quo and to eliminate potential causes of intra-tribal warfare. The Iroquois believed the deplorable sin of envy to be a motivation for witchcraft, which perhaps motivated their dislike of ostentatious display and provided a further reason for consigning material wealth to burial (Snow: 1994; 98).

Not all functional artefacts were destroyed at the death of their owner. In fact the life of some objects effectively ended, through wear or breakage, during the lifetime of the user. The Iroquois nations received trade goods from Europeans as early as the middle of the sixteenth century. Amongst these goods were copper kettles, many of which were initially provided by Basque fishermen in the Gulf of St Lawrence. These kettles had value not only as utensils, but also as a source of sheet copper, which was cut from the kettles once they had worn out (Snow: 1994; 77). In light of this evidence it is germane to indicate that the Navaho also reused metal after the original function of a kettle or pan became redundant through wear. Before silver became plentiful to the Navajo in around 1890 they would fashion bracelets from copper. Some of the metal would be purchased as wire or sheets from the trading posts, but copper was also known to be cut from pans and kettles in order to fabricate the jewellery (Fane: 1991; 78). Therefore the reuse of raw materials, especially those considered to be valuable, would sometimes occur, rather than repair, to a damaged artefact. It could be postulated that one reason for this occurrence was that repair was not considered to be a practical option, perhaps because it would be too expensive, time-consuming or ineffectual. Alternatively there might have been concern that repair might endanger the would-be conservator if the energy, from the spirit imbued in the object by the maker, was at odds with that of the repairer. However, when dealing with functional objects the decision to reuse rather than repair is probably more governed by practical considerations than taboo.

Yet twentieth century Navajo weaver Ann Lane Hedlund heard from the grandmother of a weaving family that antique textiles should not be repaired. According to the grandmother, "People used to say, 'Don't restore rugs, just leave them as is.' That's what I heard a long time ago. Just let it wear and tear."(Hedlund: 1997; 65). Hedlund goes on to explain that the grandmother's family believed that the emotional energy invested in the textile by the original weaver might endanger the restorer, since the psychological condition of the repairer might be at odds with that of the first weaver (Ibid). This is example of the active prohibition of conservation for the protection of the would be conservator. In this case there is no question of reuse of raw materials, since the artefact continues in its original role, if in a deteriorated state. The rug is not repaired because it is a powerful functional object. The item is used and has a use, but is distinguished from some other functional artefacts due to the symbolic patterns

woven into its fabric and exceptional effort and time devoted to its creation. These factors equate to power invested in the artefact, which potentially presents a physical risk to someone attempting repair.

Usually it is only the more sedentary tribes that possess or produce substantial quantities of ceramic vessels, since the transportation of heavy, fragile objects is incongruous with a nomadic lifestyle. However, where ceramics are known to be used there is a paucity of evidence for the native repair of ceramic artefacts. This is perhaps because broken ceramics tended to be reused rather than repaired and there are ethnographic reports of clay preparation that bear witness to the use of pottery sherds in the tempering of the clay. Stewart Culin, a curator at the Brooklyn Institute of Art and Sciences at the start of the twentieth century, described in his 1904 expedition report, the processing of Zuni clay. The clay is broken into small fragments, on the living room floor of the house, with the aid of an axe. The fragments are powdered on a grinding stone, transferred to a bowl to which water is added to produce a paste. It is at this stage that "powdered fragments of old pottery are often added to the mass" (Culin: 1904a cited in Fane: 1991; 119). From the implied frequency of the reuse of broken pottery it could be inferred that breakages were a fairly common occurrence and that repair was not. It is quite likely that reuse was preferred to repair in this instance, because repairs might have proved impractical and have failed to restore complete functionality.

It is of interest to note that scrutiny of the artefacts of Northwest Coast tribes collected by Captain Cook on his third voyage (1776 – 1778) reveals that many were broken and partially repaired by the natives. It seemed that the people were prepared to part with damaged artefacts more readily than fully functional examples (Feest: 1992; 19). It is interesting, however, that rather than discard broken objects outright attempts were made to return functionality through repair. It would seem that the tribes traded what they could make do without. The repairs were probably made because the groups were materially impoverished and could not afford to discard items at the first sign of damage. However, when these artefacts gained unexpected value as trade goods they could then be exchanged for goods probably worth more to the natives than the damaged articles.

Perceptions of value regarding material culture:

The Hopi and Navaho valued clothes and baskets, precious stones and pollen and beyond these fine furs and jewellery. These items of value are listed in the Hopi myth of the Stricken Twins and the list is accepted by the peoples to hold true (Reichard: 1963; 128, 129, 130). The manufacture of garments and baskets is both skilled and labour intensive, which might be why these artefacts are so highly esteemed. When items of value are not destroyed upon the demise of the owner it is possible that these will be preserved as heirlooms, and it is such artefacts that are likely to bear signs of repair, since measures would be taken to maximise their retention.

The reuse of artefacts has been discussed above, but a different form of recycling, that pertains to artefact retention, has not yet been touched upon. This so-called "recycling" can be witnessed in the change of value attribution in the silver and leather wrist guards collected by Culin from the Navajo. These were originally designed to be worn on a man's left arm to protect from bruising that could be caused by the snap of a bowstring (Fane: 1991; 79). However, these continued to be worn for decorative purposes, thus changing the artefact from a decorated functional object that represented activities pertaining to men, to a decorative male symbol more likely to be associated with status or material wealth. In this instance the shift in value attribution is probably a result of increased economic stability and demonstrates that the treatment or perception of artefacts changed with time and circumstance.

Heirloom artefacts:

Artefacts that tend to acquire heirloom status are items considered to be of high value, either because they were acquired through trade, or because their creation was time and labour intensive. Traded blankets have been known to be kept as heirlooms, along with intra-tribally crafted treasures, such as baskets, garments and jewellery. Heirloom artefacts often possess a functional value, but might be used infrequently, such as garments that are worn only at designated ceremonies, having greater symbolic value. Heirlooms are a class of artefacts that is likely to yield examples of repair attempts, since there is a desire to make the articles endure for as long as possible. What is more, heirlooms are closely associated with social status, since the possession and display of heirlooms is an indication of material wealth. In order for

an heirloom to make the maximum visual impact it is important that its physical appearance is sound. This would also help to explain the incidence of repairs. In 1903 Culin collected a hand-spun Zuni poncho that was probably considered to be an heirloom item and showed evidence of several repairs (Fane: 1991; 126). In the following year Culin acquired a Zuni woman's dress fabricated from hand-woven wool. The dress, although acquired though trade, perhaps with the Navajo, would most certainly have been regarded as an heirloom to be worn on special occasions. The condition of the dress is good, with the exception of some red decorative stitching that has been repaired (Fane: 1991; 129). Belts were traditionally worn with this style of raiment and it is possibly this that caused the damage. It could be inferred that repair of the decorative stitching was executed to maintain the smart appearance of a socially important garment and could perhaps be considered to be conservation.

Non-artefactual heirlooms:

Californian tribes, along with groups from other regions, tended to possess non-artefactual heirlooms in the form of spells, titles and status. Sometimes the intangible heirlooms would belong directly to individuals to be passed to next of kin, but it was not uncommon for spells to be held in trust on behalf of a society or tribe. These esoteric possessions were highly regarded, since they could influence the fortune and social standing of family groups or a whole tribe. Immaterial heirlooms were valued at least as highly as physical heirlooms, because they were such powerful and influential possessions. Since inheritance of these heirlooms was not necessarily automatic they were not taken for granted and great care was taken to ensure that they could be passed between the generations. Ceremonies, rituals and oral tradition each played a part in the maintenance of this vital facet of Native American heritage.

Ceremonial artefacts:

The ceremonial artefacts of the Native Americans were of great interest to museum curators, who sought examples for their museums and ethnographers, who wanted to reveal their secrets. Native American religious ceremonies dictated the need for appropriate ceremonial paraphernalia, and yet when Culin visited the Navajo on their Arizona/New Mexico reservation he found the people to be poorly endowed with material culture. Culin described the average hogan [usually a wooden dwelling] to be equipped with: "A few baskets and earthen pots, a mealing stone, with two or three

grass brushes… an iron frying pan and a few dishes and tin cup" (Culin: 1904b; 50, 54, 55 cited in Fane: 1991; 50). The artefacts that Culin most desired to see were those that were not on display, but hidden from view: "Their masks and ceremonial objects …[which] are guarded with infinite care" (Ibid). Denying Culin and other parties access to religious artefacts meant that it was not always possible to gauge the extent to which native conservation was practiced. However, it is crucial to understand the aetiology behind the visual absence of ceremonial artefacts. It would not be unreasonable to assume that the Native Americans wanted to protect their valued and secret objects from the avarice or meddling of outsiders, especially since no-one had the jurisdiction to sell such artefacts: "The things that the collector most desires, such as masks, and the paraphernalia of the dances and ceremonies, are usually the property of a society and cannot be disposed of (Culin: 1901b; 18, cited in Fane: 1991; 22). However, ceremonial artefacts were not only hidden from collectors who sought to acquire items that were not for sale, but also from everyday view by the owners and their neighbours. One reason for this scenario was the protection of people from the potentially dangerous powers imbued in religious artefacts. The sale of religious objects could expose the previous owner to threats that the ownership of artefacts had previously protected against, and so was not a common occurrence.

Navaho œremony singers, or chanters, all possess medicine bundles, which can be added to during the owner's career, but tend to contain at least the fundamental elements of a rattle, bows, arrows and bull-roarers. Some bundles are thought to accrue so much power that they are buried with the deceased, thus removing the artefacts from sight and scrutiny. It could be that the religious achievement of the singer was such that no one is prepared to accept the responsibility of the power invested in the possessions. On the other hand some bundles are assembled for specific chants, such as the Flint Chant, and the singer holds the accumulated power in trust for the tribe, so that on their demise the bundle is retained for future use, thus allowing for the continuity of the power (Reichard: 1963; 339, 340).

Whenever an object required for a ceremony is absent it can be represented in sand. In fact many ceremonial artefacts themselves are substitutes for the originals they represent. For example sand can be employed to substitute the ephemeral materials on which the first mythological sandpainting was drawn. Quantity also plays an

important role in Navaho ritual, since a minute amount of material in a prayer stick, such as jewels, feathers or tobacco stands for unlimited resources of the same and carries equivalent importance (Reichard: 1963; 116). This demonstrates the symbolic nature of the items and materials, and the lack of necessity for the original items to be retained if other physical materials can be adequate substitutes.

Despite the Navaho phobia of the dead, the people are described in myth as scalp-takers, which extended to real war situations where enemy scalps would be taken as trophies. The scalps were more than mere trophies, since these, or other body parts, such as sinew, were required for ceremonies and witchcraft. At one point no body part could be substituted for a scalp in the War Ceremony, but later bone hair or clothing from a dead enemy would suffice in lieu of a scalp to represent a scalp. The power of the scalps or tokens was such that the items had to be hidden amongst rocks until required for the next ceremony (Reichard: 1963; 595, 596). So it can be seen that care was taken not to preserve the physical remains but to preserve the supernatural qualities they held; and as such the preservation of the physical material was of secondary concern.

Many religious artefacts are not designed to be retained. For example, the wooden prayer sticks used by the Navajo are made new for each ceremony in which they are required, since they are destroyed in the course of the ceremonial rituals (Fane: 1991; 93, 94). It would stand to reason, therefore, that prayer sticks engaged in ceremonial use would not survive. Even more impermanent are the Navajo sandpaintings employed for the curing of the sick. Each sandpainting is prepared for a specific ceremony by "painting" in loose sand and pigments a proscribed sacred design. The efficacy of the treatment is in part dependent upon the rubbing out of the design at the completion of the ceremony. In the early 1930s the ethnographer Reichard observed the illness of a Navaho woman that was believed by her neighbours to be caused by disregarding a religious taboo pertaining to sandpaintings. The woman was acknowledged to be an expert weaver and had woven some of the largest and most complex sandpaintings designs. Her sin was not only to copy the sacred patterns, but also to record these usually transient images in a permanent medium (Reichard: 1963; 96).

Hopi Kachina dolls were decorated wooden figurines representing members of the pantheon. The character of each doll could be recognised through the application of distinctive features, clothing or decoration. Kachina dolls were handed to women and children at the relevant ceremonies and their religious connection and depiction conferred ceremonial status on the artefacts. Culin collected a number of dolls that had been commissioned by him, since acquisition of originals through sale was rare. However, amongst the collection was a male figure whose right arm was held together with hide thong. This probably represents a native repair on an original Kachina doll (Fane: 1991; 150), and so the object was clearly of sufficient value to merit repair.

The Navajo god impersonator masks employed in the Nightway curing ceremony were constructed and curated in a ritually controlled fashion, since they were designed to seek the attention of deities, or the Holy People. It was customary for the masks to be dressed with paint and feathers before each performance, thus constituting a form of restoration (Fane: 1991; 94). The Sun's House screen is employed in certain Navaho curing ceremonies and incorporates carved and painted wooden snakes that can be animated during the rituals. In preparation for a ceremony the screen and snakes are often repainted.

The repair and conservation of artefacts:

Since Culin had little success in securing ritual artefacts from Native Americans he circumvented them and in 1903 acquired a ceremonial Navajo duck carved from cottonwood root from the trader Charles Day. Certain animals were believed to cause illness and it was a Navajo tradition to carve the image of the beast believed to be culpable and to hide the carving away. Once hidden no one should touch the effigy (Fane: 1991; 71). Examples such as this might go some way to explaining why certain categories of artefact were not repaired or conserved.

During Culin's brief stays with the Zuni (between 1903 & 1904) he secured the services of a native interpreter, nicknamed Nick, who could reproduce the local games that Culin was so keen to collect. Nick would restore incomplete items and redecorated some artefacts. Perhaps Nick's willingness to repair objects was dependent upon the knowledge that the artefacts sold to Culin – including weapons, agricultural implements, games and musical instruments – were considered to be

refuse by the Zuni women who parted with them, since they were no longer used (Fane: 1991; 58, 59).

Ahayrida are Zuni 'War Gods', who are considered to be protectors of the Zuni people, guarding against natural and human-caused disaster (Kreps : 2003, 90). Images of these gods are created annually and placed in shrines. When a new image is added, the old incarnation is removed and placed with the previous gods. This does not represent discard, since it is through their disintegration that the gods manifest their protective powers. For this reason, it would be inappropriate to preserve them, (Kreps : ibid.). This demonstrates that not all artefacts should be conserved, since cultural value can actually be realised through the physical deterioration of some objects.

Native American cultural centres, loosely based on traditional museum models, have increased in indigenous communities since the 1990s. The purpose of these facilities is to house cultural artefacts and to act as a venue for the perpetration of cultural tradition (Kreps ; 2003, 105). Cultural traditions can be transmitted through the medium of oral traditions, arts and crafts skills and traditional religious practices (ibid.).

Within the context of the cultural centres, new approaches to cultural heritage presentation are developed. For example, the Yup'ik of Alaska created a cultural centre to emulate a gasgig, or traditional community house, but with adaptation to the modern setting, combining traditional approaches to object care with contemporary approached (Kreps : 2003, 107).

Two thirds of the collections at the Hoopa Tribal Museum, California, are long term loans of artefacts by local Hoopa families. The donations are made for various reasons. For example, the museum will care for the objects appropriately and is better protected from fire and theft than their own homes. The Hoopa are proud to see their heritage displayed, but also have the option of using the artefacts in cultural activities (Kreps : 2003, 108).

The museum is based on the model of traditional object care, whereby heirlooms and regalia would be attended to by a family 'curator' (a man) who will keep the objects in good repair and provide for their spiritual needs (ibid.).

"Some museum professionals would argue that museums as scientific entities should not be vehicles for religious expression and should manage collections in a strictly objective manner. [But] incorporating the religious and ritual meaning of an object as presented by the indigenous culture into its care and preservation enhances its information value and adds an additional story to the object's life history." (Flynn & Hull-Walski : 2001, 31)

Conclusion:

It can be seen that where there are strong spiritual beliefs, objects are considered to be endowed with spirit, and that the object itself takes on a symbolic role. Repairs to such objects are functional in nature. Whilst heirlooms may be kept by future generations, as they are perceived as possessing some supernatural qualities, the objects are likely to show signs of some repair but also some decay. However, ceremonial items may in fact be destroyed in order to preserve the spirit rather than the object, which will have served its symbolic purpose upon destruction. Clearly the individual circumstances will determine whether an object is preserved or destroyed.

Where social beliefs are weakened, economic necessity and changes in beliefs can lead to objects being treated differently. Culin discovered that changes in social and economic circumstances, along with religious conversion brought ceremonial artefacts and heirlooms into circulation when previously the attainment of these had been denied to the collector (Fane: 1991; 26). Much of the materials held in museums will have been obtained from this route. In 1923 Culin recalled an occasion, probably towards the beginning of the twentieth century when a party of Zuni Indians were taken to the National Museum in Washington and described it as "a great shop where nothing was sold" (Culin cited in Jacknis: 1991; 38).

Survey Results for Native American Culture

See Appendix 6 for definitions of the categories used in the charts.

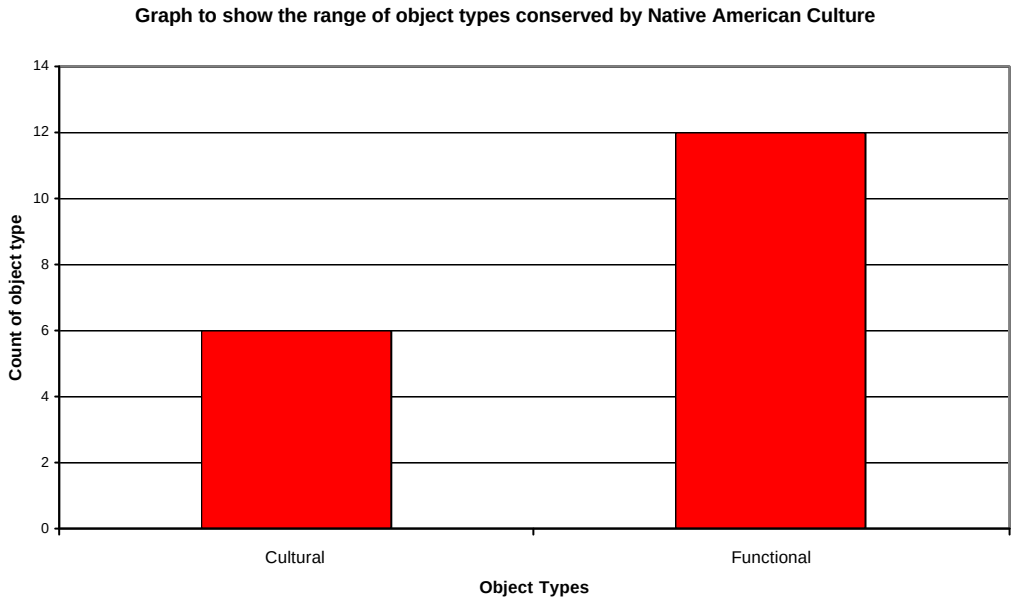


Figure 7:1

Figure 7:1 is a chart displaying the range of object types conserved by Native American Culture. The set is split between cultural and functional objects, with the majority of items belonging to the latter category. This pattern differs from most of the other cultural groups, but fits with existing knowledge about the Native Americans. Native American Culture teemed with religious artefacts, which would be subsumed here under the cultural category. Yet these objects were not always meant to endure, some being remade and others abandoned (hidden). However, some cultural objects, such as the ceremonial masks in the set, were reused and received "conservation" treatment before further use. The functional objects were often fashioned from organic material and many were labour intensive to make, such as baskets and fishhooks. This helps to explain why they were retained for repair and not discarded.

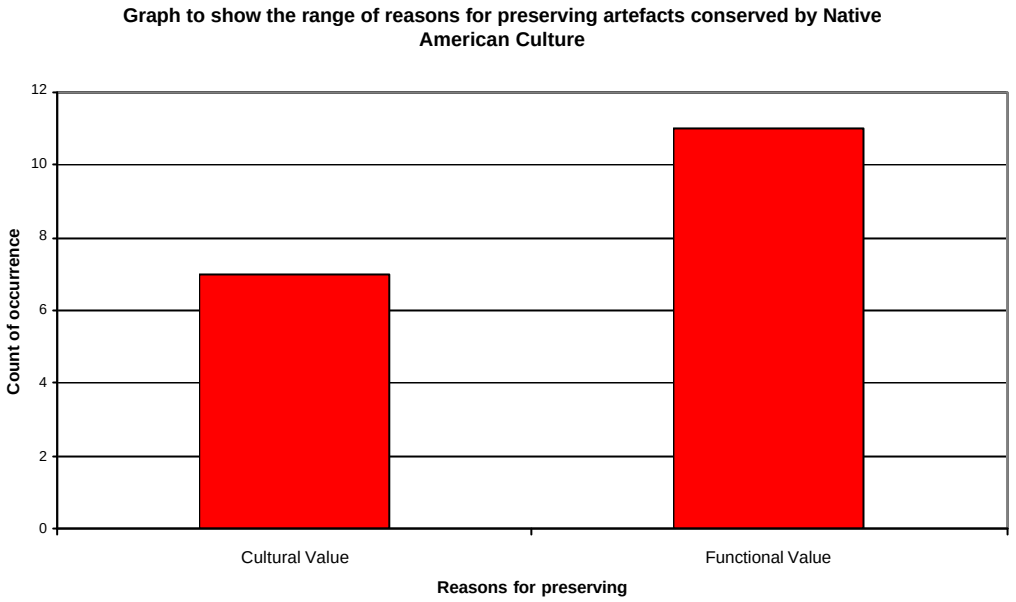


Figure 7:2

Figure 7:2 is a chart showing the range of reasons Native American Culture has for preserving artefacts. The split between objects with cultural and functional value is very similar to the balance seen in the previous graph (**Figure 7:1**), with the exception that one of the functional objects has gained cultural value. This is an iron knife with a bone sheath that has split and been repaired with leather and nails.

Figure 7:3 is a chart depicting the range of materials conserved by Native American Culture. The basketry, bone and iron represent the functional baskets, fishhooks, knife and sheath. The copper and wood belong to the cultural objects – the ceremonial masks (wood) and shield (copper). The wood and copper represent high value materials in this culture, hence their use in cultural artefacts.

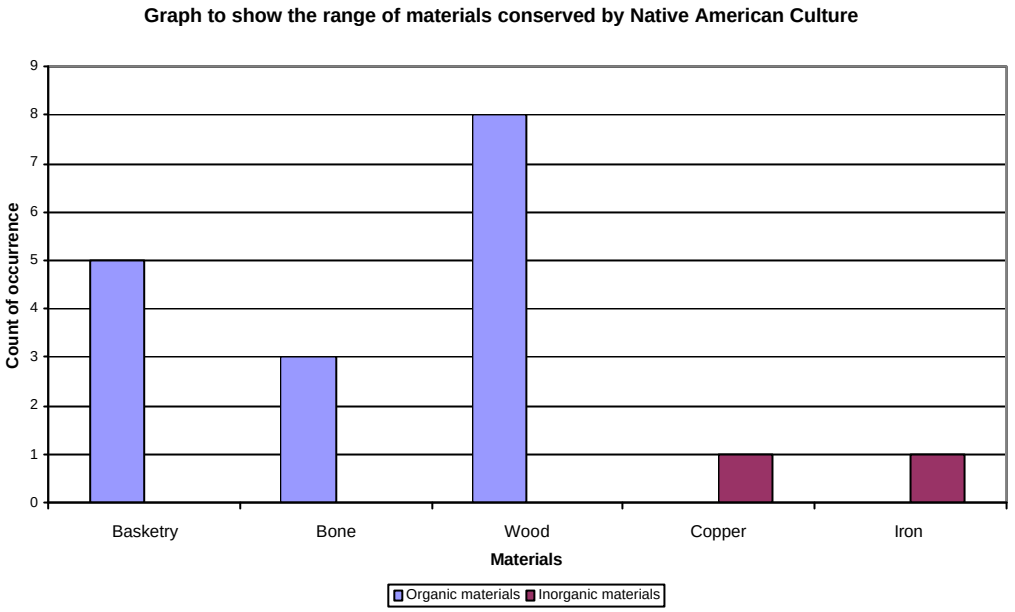


Figure 7:3

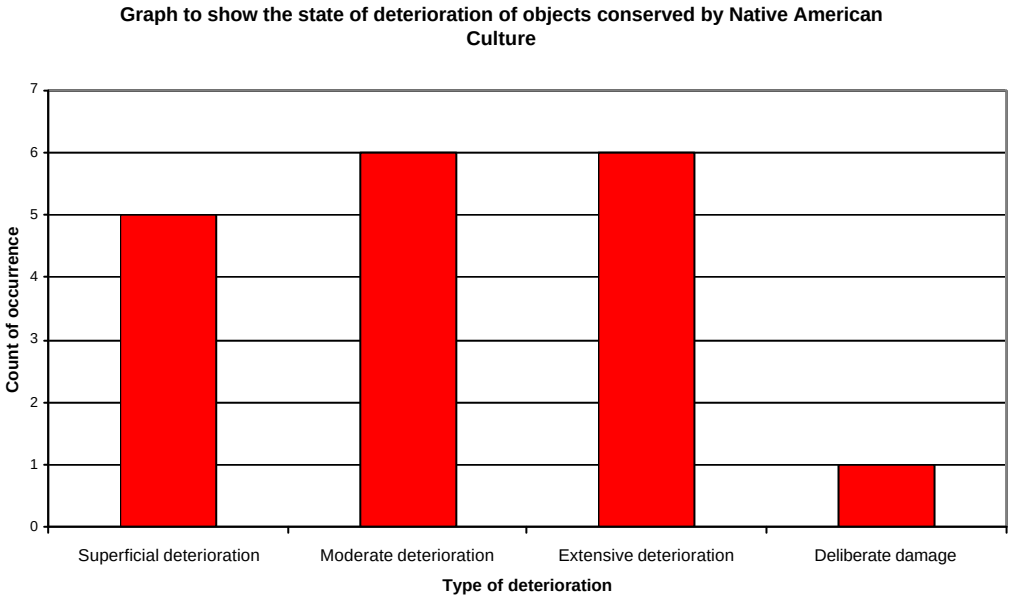


Figure 7:4

Figure 7:4 is a chart displaying the state of deterioration of the objects conserved by Native American Culture. There are a variety of deterioration states represented within the group. The ceremonial masks showed only superficial deterioration, whereas the fishhooks displayed moderate deterioration. The baskets within the group had been squashed, which accounts for the extensive deterioration. The one example of deliberate damage pertains to the copper ceremonial shield, which had small sections of metal removed during ceremonies. This action demonstrated that

the owner was wealthy enough and powerful enough to destroy part of a very valuable artefact.

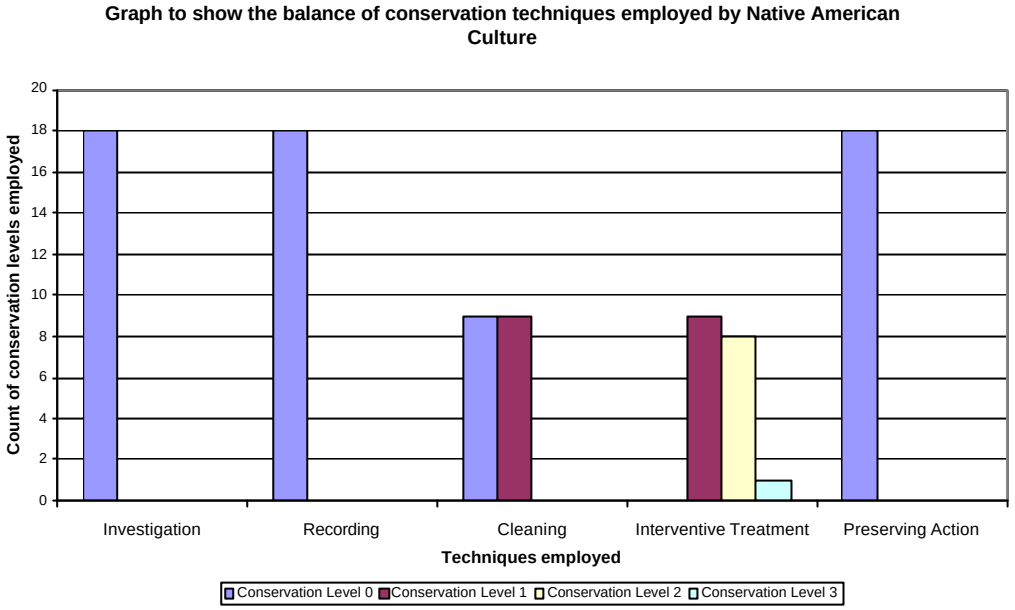


Figure 7:5

Figure 7:5 is a chart showing the balance of conservation techniques employed by Native American Culture. There is no evidence for investigation, recording or preserving action, which is consistent with what is known about the culture. The limited cleaning (Level 1) relates to the wooden ceremonial masks, which were cleaned before reuse. The masks also underwent Level 2 interventive treatment, in order to restore their original appearance. This is of importance, since appearance and symbolism are vital elements in Native American religion and ritual. The baskets and fishhooks received stabilising interventive treatment, in order to restore functionality. Pieces of metal were clipped from the copper shield during ceremonies, thus altering its original appearance.

Chapter summary

What is conserved :

The artefact set is split between cultural objects, such as religious artefacts and ceremonial masks; and functional objects, such as baskets, fish hooks and knives.

Why have the objects been conserved?

The cultural objects have been conserved because they represent a high degree of value to the owners, thus meriting the conservation effort required to repair the damage. The functional items were repaired to maintain the functionality of the artefacts.

How have the objects been conserved?

There is evidence of limited cleaning being applied to ceremonial masks before interventive treatment was undertaken to restore their original appearance. Stabilising treatments were employed to restore functionality to the functional items.

CHAPTER 8

Aborigine and Maori Cultures

Introduction:

Dating evidence from Australian rock art attests that the Aboriginal peoples have populated the region for at least 60,000 years. At least this is the Western scientific interpretation of the evidence. The Aborigines, however, believe that their people have been there for all time, effectively since the creation of the land by their ancestral beings. In order to understand this perspective it is necessary to become familiar with the aboriginal Dreaming, or Dreamtime – "alchera" (Aranda terminology) (Moisseeff: 2002; 246) – which inextricably links the native totemic religion to land use and all other branches of cultural life. According to the Aranda tribe, a northern group in central Australia, all cultural phenomena, such as rituals and social organisation proceed from Dreaming. Yet the Dreaming is more extensive than this – it represents the formation of the landscape and incarnation of all living beings, constituting the Aboriginal Creation myth. What is exceptional about this creation myth is its lack of conventional anthropomorphic heroes and gods and its a-temporal nature. Dreamtime was not a past Golden Age, but an eternal and iterative occurrence that can be tapped into. It is important not to refer to the Dreaming in merely abstract terms, since it explains how substance is begotten by the insubstantial. The Aborigines can evoke the Dreaming on a narrative level by describing the journeys of eternal beings who can simultaneously embody human and non-human form – hybrid beings possessed of exceptional mobility. The Dreaming beings can burrow into the ground and fly and the Australian landscape is believed to have been shaped by their movements. Of the non-human shapes Dreaming beings can assume plants and animals define their totemic identity and, therefore the species for which their human descendants will be responsible for in term s of propagation. Dreaming beings can also take the shape of landscape features, often their final incarnations, marking the end of their journeys, and ritual objects (tjurunga / churinga). As the various Dreaming beings traversed the lands that were to become tribal territories they impregnated the ground with an infinite number of incorporeal spirit-children, which would become incarnated as humans and the plant and animal species associated with each specific being.

Culture and country:

In order to understand the motivation behind Aboriginal social behaviour, religion and their treatment of material culture it is important to address their relationship to their land. Aborigines identify strongly with their territory, which they refer to as their country – a representation of the spatial unit occupied by a band or clan (Best: 2003; 30). Stanner (1965) defines "band" as a land-using group, comprising several family units connected by kinship and clan affiliation (Birdsell: 1973; 338). According to Stanner a "clan" is a totemic land-holding group and the "country" is passed on to each successive generation through inheritance. Radcliffe-Brown (1930-1: 63) observed that there is not only a strong bond to territory, but also to the plants, animals and features found there, which form the basis of their totemism. Band size can change on a seasonal basis as families unite or disband according to required labour division, but this does not alter affiliation to country. However, it has been noted by several authors (Sharp: 1958, Rigsby: 1982 and Morphy: 1995) that in northern Australia there have been changes in territorial organisation, whereby landscape has been redefined as one clan dies out and another emerges. This occurrence is probably most pronounced in the twentieth century and at other times of social pressure or crisis. What does not alter, however is the sacred knowledge of the land, encapsulated in oral narrative and summed up by Morphy (1995; 204): "Thus the articulation of social groups with the landscape is always changing, but the mythic screen that covers the landscape makes the relationship appear unchanging".

Environment and conservation:

To the Aboriginal peoples of Australia the preservation of a "sense of place" is at the heart of their culture (Sullivan: 1991; 3). To explain this culture-specific concept I shall draw upon an example of hazardous tree-growth near a rock art site in Kakadu Park. The Aboriginal groups of the area own the site, both culturally and legally, and so were consulted about an appropriate course of action when the Park Service raised concerns about the fire risk posed by a group of trees growing close to painted surfaces. The first solution proffered by the Park Service was the removal of the offending vegetation. This plan, however, was vetoed by the site owners on account of the reduction in shade that would result from the trees' removal. Furthermore the loss of the trees might adversely affect the water table, and hence the availability of surface water. The reason that this damage to the site is of concern to the Aborigines

is because they possess a holistic view of the area and its potential as a camping ground, which extends beyond issues of preservation of merely the painted shelter, which comprises only part of the site (Sullivan: 1991; 4). By contrast the owners did not object to the proposal for a roof to be constructed over the site, because unlike the tree removal scheme this plan enhanced existing shade and thus increased the value of the site as a camping ground (Ibid). It should be noted that white Australians were not keen on the roof, which they regarded to be "intrusive". This group of Australians were only in a position to reach this opinion based on the aesthetic impact that the roof had on the site and does not take into consideration the all important "sense of place" that was not compromised by the decision.

Ownership of designs:

In order to harness the power of the land, that species may proliferate and aid the survival of the people, it is necessary to have a channel through which the Dreaming can be accessed. The depiction of totemic designs opens the channels of communication. Clans and lineages possess inalienable ownership of a set of motifs and designs that pertain to the legends associated with the group. Only those within the kinship group can depict the motifs belonging to them, or permit others to use the designs under strict supervision. Since the painting or carving of designs is usually only undertaken in a religious context it is mainly men who are responsible for their depiction, since women and children are largely excluded from such activities. Within a group each man acquires at birth a specific, but limited set of designs, which he will be called upon to carve or paint under given ceremonial circumstances. It should be noted that a man does not have access to his entire repertoire until he has passed through all phases of initiation. The physical form of the motifs is considered to be sacred and is not supposed to change over time. Although the rules for depiction are inflexible, in actuality slight variations of form are likely to emerge over substantial time periods. However, in essence it is appreciated that designs are supposed to be constant, with the only appreciable variation being the skill of the individual artist. It is of interest to note that poorly depicted design is equally valid in ceremonial contexts as a well crafted image, provided the fundamental form is "correct". The value in the "art", or endeavour is that it performs successfully and aesthetic merit is purely incidental. For this reason a skilled artist would not be asked to create the motifs in the place of a less adept man, since this would be not only

unnecessary, but also not sanctioned, since the new man would not have the jurisdiction to create the motifs (Maynard: 1973; 63).

Although Australia is an enormous landmass, with a huge variety of resources, the raw materials required for food supply, weapon, tool and regalia-crafting are not evenly distributed. This tends to promote contact and trade between neighbouring, and sometimes more distant, groups. As a consequence applications need to be made for permission to travel through, and occasionally exploit resources, in the country of another group. For these reasons it is vital that visible markers, such as artefact display and body decoration are decipherable by different social and language groups, so that intentions can be conveyed unambiguously and access to territories permitted or withheld. It then stands to reason Aboriginal groups require a core repertoire of symbols that can be deployed through material culture (Best: 2003; 17). However, such similarities are not required to be more than superficial and do not preclude the employment of codified symbols, within the same artefacts, that can speak to those within the group, party to the cipher of knowledge, and not to those without.

According to Wobst (1977) the target group for stylistic messages are likely to be familiar, but socially distant individuals, since the immediate friendship and kin group would already be aware of the social situation of those displaying the stylistic information. Best (2003: 22) identifies limiting factors in the studies of Wobst and others, which renders the interpretation of material culture treatment an inaccurate science. Crucially there is no evaluation of the acquisition and preparation of raw materials, the processes of production or the exchange and discard of artefacts. The omission of such discussion might be because motivations for these actions are considered to be universal, or perhaps because these aspects of culture are embedded in tradition and the aetiology is difficult to establish. However other technological issues are beginning to be addressed, such as whether or not it is legitimate to discuss politics, performance and belief and their relationship to material culture; whether social information is encoded in artefacts from the acquisition of raw materials until the disposal and disappearance of the objects, or only contained in finished "functional" items (Ibid).

Message sticks are a category of artefact that can convey complex information pertaining to social interactions, such as exchange, or invitation to gatherings. Since these sticks can travel great distances it is vital that the messages are depicted in such a way that is meaningful to distant groups, employing a repertoire that includes a sufficient number of catholic symbols. Only minimal restricted information is likely to be encoded in such items. Ceremonial artefacts, by contrast, can contain groups of items that are displayed to a restricted audience on account of the secret information that they convey. However, inter-clan ceremonial activities tend to employ artefacts, such as shields and decorated boomerangs that contain a level of information more comparable to that conveyed on message sticks, except that these are highly visible objects. Symbols on these ceremonial articles tend to pertain to aspects of identity – totemic affiliation, gender and initiation status – and, by association, social status. In this way visual information is important for disseminating and preserving the status quo. There are categories of artefact that are often undecorated, such as bags (mainly crafted by women, who have limited access to clan designs) and spearthrowers, since these do not tend to be employed as social markers (Best: 2003; 19).

Sutton (1988: 182) describes Aboriginal Australian art as the "most hierarchically controlled and least spontaneous in the modern world". The statement reflects the learned and applied principles of symbolism, which usually pertain to sacred and restricted knowledge. Aborigines, like many hunter-gather groups, practise the user-maker principle, whereby a person manufactures the objects that they will use (Mackenzie: 1991). The knowledge required for the fabrication of artefacts is often passed through the generations from parent to child, where the apprentice will attempt to emulate their teacher. Since what is classified as art, by the West, is mainly a male domain amongst the Aborigines, because it is initiated men who control clan symbols, the conventions are passed from elder to initiate and the repertoire built as a man progresses through his passage of initiation. It is known that the inherited knowledge is inalienable, and so it should be transposed through the generations with little alteration, transcending transitory phases, such as changes in fashion. However there is still potential for discontinuities to occur in the transfer of knowledge and information, a prime example being the death of a "teacher". This is an occurrence that must be familiar to all groups employing the user-maker principle, but the Australian Aborigines have encountered even more disruptive forces, namely

geographical relocation and political opposition to the manufacture of certain classes of artefact, such as spears (Pryor & Carr 1995). These factors can have a detrimental effect upon group identity and cause the loss of traditional skills and information that may be irrecoverable several generations on. This is how the meaning of some symbols and the paintings at certain rock art sites lose their translation and vitality and become consigned to the realms of the past.

Munn observes that the Aboriginal symbolic repertoire fall into two categories: elementary and composite. The former group comprises irreducible shapes, such as straight lines, circles and arcs, which have the potential for multiple meanings, since they can represent any straight or circular objects. The latter group is the combination of elementary elements to produce complex symbols that form the basis of men's totemic designs. The meaning of the composite symbols is usually conveyed and learned through oral tradition, since a narrative often accompanies the depiction of the symbols, or their use in a performance. Therefore only those entitled to participate in such events will be able to interpret sacred information, but the elementary symbols and their arrangements tend to possess more universal meanings that provides a flexible, comprehensible shorthand that can be employed to convey messages to different groups via toas (pointing sticks).

In the rainforests of Queensland toas used to indicate the direction of travel could be made from broken sticks stuck into or laid on the ground. In the Lake Eyre region, however, the Dieri fabricated more complex toas, either from clay or carved wood, which could convey a range of social information. Along with directional instructions there might be motifs that relate the purpose or duration of a journey. Once set in the ground there is little control over who happens upon the toa, but the designs determine who can read the full message, since some of it may be mythological, restricted material. For example it may be apparent to many that the designated meeting place is a rock outcrop, but only initiates of a specific group will be able to translate which outcrop it is. Since toas can be used for survival purposes, such as directing people to shelter or water-holes, it is important that the basic level of message employs universally recognised symbols (Best: 2203; 27).

Rock paintings and impermanence:

Sacred ceremonial activity in Central Australia often occurs near rock outcrops, which can provide suitable surfaces for the painting of motifs that are associated with the site's legends. New paint is added on top of existing emblems, which provides a reinvigorating effect, revitalising Dreamtime powers. This action does not tend to efface existing designs, since by and large these tend to deteriorate and fade between ceremonies. The reason for this occurrence is that the rock faces tend to be exposed, to some extent, to the weather, which contributes to flaking and deterioration. In addition, the pigments themselves are bound only with water, which provides limited binding capabilities. What should be appreciated is that permanence of the images is of little importance, since it is the act of depicting them that taps into the Dreamtime and Dreamtime has to be accessed each time the ceremony is performed, so the designs would have to be repainted regardless of what remained on the rock face (Maynard: 2003; 63).

Not all rock art sites are central to annual ceremonies, and so it is possible that successive paintings will be executed by different generations. Sometimes a new painting will be created over the top of an existing scheme, thus hiding it from view. It would be ethnocentric to view the action as demonstrating a lack of respect for previous artists' work, especially since Maynard speculates that the superimposition of some paintings may be to create a metaphysical link to earlier motifs (Maynard: 1973; 64). The visibility of the designs, therefore, is far less important than its existential quality. These actions can effectively maintain a near constant link to the Dreamtime – a portal to this vital dimension – but, should too much time elapse between paintings and all traces disappear, the link is severed. After European contact and the establishment of missions, it was not uncommon for sacred sites to be neglected and there are numerous examples of this in Central Australia. Where traces of rock art do remain after periods of abandonment the Aboriginal owners of the site view the traces as a historical document. This means that the art can be preserved as it is, but it is often not considered appropriate to over-paint the images, almost as if the designs have become static and are no longer "vital".

In the Kimberleys the creative spirits, at their journey's end in Dreamtime, sank into the rock surfaces. The "Wandjina" figures painted on these surfaces are believed to

encapsulate the spirits, and so by repainting them annually it is tantamount to reapplying body decoration, reinvigorating the spirits and helping to secure rainfall (Maynard: 1973; 63). It would not be considered appropriate behaviour to leave the figures until they actively needed repainting, since it would not have the effect of reawakening the Dreamtime connection and prompting the spirits in to action – it should not be taken for granted that they would supply rain if left alone.

Rock art and preservation:

The Aboriginal owners of the Kakadu and Uluru rock art sites regard these to be a "storehouse of traditional knowledge", where art by living artists belongs to the present and that of past generations, the traditional cosmology and the realms of the past (Sullivan: 1991; 3). When there is deterioration of art by living Aborigines interventive treatment, such as repainting by the artist, is considered to be an appropriate course of action. However, for images belonging to the "past", preservation is a more acceptable option, whereby deterioration is halted or retarded, provided that images are not altered or repainted (Sullivan: 1991; 5). This is so that the meaning of the images, which could become less comprehensible over time, is not adjusted or effaced.

The transitory nature of ceremonial regalia:

For sacred ceremonies in Arnhem Land initiated participants have their bodies painted with sacred motifs that allow the actors, for the duration of the ceremony, to be converted into an appropriate Dreamtime ancestor. The actor must undertake a performance that signals, through carefully choreographed movements, which ancestor he is to become, which then allows the transfer of the requisite power to enhance human or animal fertility, or initiate boys, for example. Once the performance is over the ancestor and powers depart. However, the actor's conversion is not the only temporary feature of such ceremonies, since much of the accompanying regalia is made for the purpose of a specific ceremony and then dismantled or destroyed (Maynard: 1973; 62). The paraphernalia can include carved and painted totemic symbols and animal models, legends depicted on bark and sculpting of the ceremonial ground. The reason for the dispersal or disposal of these artefacts is largely the exercising of good sense. Being nomadic peoples the Aborigines do not have the facility to store sacred items, which must be hidden from

the sight of women and children, while they are out of use and it is not wise to carry extra equipment to camps when it will not be required. Therefore the issue of repair or conservation of many of these artefacts, outside of a museum context, is academic, since these objects are not supposed to last.

Adaptation and the need for "disposable" artefacts:

Thomson (1939; 209) makes a very astute observation pertaining to seasonal resource exploitation and its direct influence upon material culture assemblages. Thomson, who studied the Wik Mungan Aborigines of Cape York Peninsula, discovered that the group were compelled to utililise the resources of different ecosystems, according to the season, in order to maintain their subsistence throughout the year. The result of the various subsistence strategies is that the Wik Mungan take on different occupations and artefacts according to season. Thomson observed that the artefact sets varied in character quite considerably, and so, when accompanied by different jobs and environments, it would be easy to mistake them for different groups (Ibid). This provides valuable information about the adaptive nature of some Aboriginal groups and their relationship with material culture. Since there is little in the way of storage opportunities at the seasonal camps, it can be postulated that tools, weapons and other classes of artefact are made from scratch at the new camp, and then, to a greater extent discarded at the end of the season. This would seem to be borne out by the treatment of much ceremonial regalia.

Multi-functionality in artefacts:

It has been acknowledged that hunter-gatherer groups are not well positioned to transport large material culture assemblages, and so successful adaptation to the lifestyle tends to be accompanied by refined tool kits that often contain multi-functional articles. This should be borne out by the material culture categories below:

Shields:

The shape of Aboriginal wooden shields is influenced by the species of wood from which they are carved. Shields of the Boulia and East Coast regions are carved from heavy Erythrine (corkwood), which has resulted in the development of small, thick shields. By contrast rainforest shields are larger and the distinctive kidney shape is a product of the objects being carved from the butt of Ficus trees. These examples

incorporate a central boss, which served to strengthen the shield (Best: 2003; 76). Shields are another multi-functioning tool, acting as clan markers, due to their polychrome totemic motifs and as protection from weapons in ceremonies that entail combat (Howitt: 1904; 777).

Wooden shields from the rainforests of northwest Queensland are kidney-shaped and bear a strengthening central boss. The motifs used to decorate the shields tend to be geometric symbols in red, yellow, black and white pigments. These artefacts are employed in a ceremonial context and can combine language group, totemic and individual information. The motifs belong to a repertory, but no two shield designs are identical. A shield is decorated by its owner with the individual's unique allocation and arrangement of motifs. Since the design is the property of the artist, when a shield is discarded the same design is transferred to a new shield. Since shield decoration is a means of displaying personal identity it is very rare for shields to be exchanged (Best: 2003; 25).

Baskets:

Hunter-gathers require refined material culture assemblages, since it is impractical to own excess possessions. For this reason the Aborigines often manufacture artefacts that are multifunctional. An example of multifunctional objects, often made new, are baskets, which are made by both men and women. Baskets can be used as food sieves and containers for transportation of gathered food, personal articles and babies (Best: 2003; 74).

Boomerangs:

Roth (1897: 144-145) succinctly states, in his discussion of Eyre region boomerangs: "The social traditions which enable style to be perpetuated become a mechanism through which group identity is upheld within a spatially defined area". Like baskets boomerangs are also multifunctional objects. In this instance they can be used as clap sticks, hammers, knives and digging tools and for hunting, fighting and games (Jones: 1996; 34). Returning boomerangs were used in male games and were made as the need arose, but this specific variety of artefact was not exchanged (Roth: 1897: 128-9), perhaps because they were discarded after use. Other morphologies of boomerang might enter the exchange system (Jones: 1996). Boomerangs are extremely versatile,

since they can not only manifest a number of physical functions, but can also transcend the secular and sacred worlds. In its secular state a boomerang tended to be coloured only with red ochre, but for ceremonies black motifs were sometimes added, which represented the owner's Dreaming myths, and transformed the object's function into a sacred artefact. After the ceremony the designs would be obscured, through rubbing, and the boomerang would once more become a secular article (Jones: 1996; 17). The ability to transform the function of artefacts meant that the Aborigines did not always require two sets of equipment – secular and religious – thus minimising pressure on resources through the simplification of their kits, rather than their lifestyle. It was important to eradicate Dreaming motifs after ceremonies, since these were to be viewed by a restricted audience, and so could not appear in everyday life where the boomerang might be seen by anyone.

Spearthrowers:

Spearthrowers, or wommeras, are yet another category of multi-functional artefacts, but which were employed ostensibly to act as an extension of the human arm, ameliorating the accuracy, velocity and range to which a spear could be thrown (Best: 2003; 78). In Cape York broad wommeras were used as spear guards as well as throwers, but Queensland examples were often more complex items, thus affording greater diversification in function. Queensland spearthrowers comprised a central body section, referred to as the blade or lath, a peg and a handle. While most of the components were wooden the handle might be supplemented with seed, shell or stone. Leaf-shaped throwers also incorporated an adze for sharpening blades, a concavity in the lath that allows for the mixing of the narcotic pituri and the thrower itself could be wielded as a sword at close quarters (Roth: 1897; 149). The leaf-shaped wommera is a very fine example of hunter-gatherer energy conservation manifested through resource and artefact streamlining.

Spears:

The shape of shields varies regionally according to resource availability, but there is greater variation in spear morphology, since different styles are employed for different purposes. For example those bearing stingray spine clusters or prongs are used for fighting, since pronged spears are designed to inflict minimal flesh damage. In the hunting of animals barbed or wood point spears are selected, since these are designed

for killing. Spears are male artefacts and most of their functions have been alluded to, but they can also appear in ceremonies as objects that are carried (Best: 2003; 77). McConnel (1930: 184) observed that spears from the coastal Cape York area, although lacking visible sacred markings, could make the transition from secular activities to the sacred arena.

Spencer and Gillen (1969: 673) made the observation that some categories of barbed spears are used only in the context or ceremonies or display and are "valued as an indication of the superior skills of the maker". This could be interpreted as conservative behaviour, since restricting the use of recognised aesthetic resources might aid the survival of such artefacts. What is more, these spears were probably made as aesthetic items and might have had the barbs configured in such a fashion that would cause functionality to be impaired. This would remove much ambiguity that could surround such items, directing the onlooker to appreciate and value the symbolic and aesthetic intentions, rather than any surmised functionality. In this and a myriad other ways the Australian Aborigines were very efficient at conveying meanings concisely and precisely.

Bags and progress:

Although Aboriginal culture can give the impression of unchanging stability, like all long-lived social groups there is an element of adaptation and adaptability that is crucial to survival and the appearance of uninterrupted continuity. Although different Aboriginal groups were largely independent and developed quite distinct regional styles, groups could also be influenced by neighbouring material culture. For example Roth (1897; 104) noticed that the mesh technique, used by the Mitakoodi of the southern Gulf region, supplanted a tradition of grass bag making. The mesh technique was then a recent innovation and had been learned from the Woonamurra and Goa, southern neighbours of the Mitakoodi. Weaving techniques were not the only factor to change in the manufacture of pituri bags, since new materials were also beginning to weave their way into the culture. Wool was gleaned from unpicked government blankets and incorporated in the bags. The willingness to embrace new resources should demonstrate that Aboriginal culture was not stagnant or superstitious, but like any other evolving group, open to the new and exotic. The use of new materials might, however, have been for more profound reasons than those

alluded to. The Aborigines might have seen the abundance of new fibres as an alternative resource that would allow for the conservation of the old.

The urge to express:

Although much emphasis has been placed upon resource conservation through the fabrication of multi-functional artefacts these are not the only variety of artefacts that are created by the Aborigines. Spencer and Gillen (1969: 663) documented the fabrication of curved, carved wooden bowls, by the Northern tribes of Central Australia, which are referred to as Pitchis. The decoration usually comprises incised parallel lines, which are added over a period of time, when the opportunity arises, since it is a time-consuming process. It has been suggested that the incised grooves are not carved laboriously to ameliorate functionality, but to achieve an aesthetic result. This is an interesting proposition for a society that has pared material possessions to a minimum and where functionality is valued in artefacts, since such objects can help to ensure human survival. Perhaps the attention to detail and desire to produce items of beauty is a fundamental human urge that is able to manifest itself when there are periods of time that do not need to be devoted solely to the pursuit of survival. This could also help to explain why the completion of the bowls is eked out over a period of time. In some respects these are true works of art, since they are an unfettered expression of the individual, as opposed to the strictly controlled depiction of sacred motifs, which could be described as functional symbols.

Conservation:

There seems to be little evidence for physical conservation. There is "conservation" effort made in the retention of information that is unique to individuals, or restricted, since this tends to pertain to sacred knowledge that is required for the propagation of species and, therefore must be protected for the sake of future generations. The inferred lack of conservation, however, cannot be fully supported as an accurate diagnosis of material culture treatment, since conservation activities do not tend to be questioned by anthropologists and field-workers, thus leading to an absence of literary references. It is probable that a certain amount of functional repair is undertaken, where repair is more time or resource effective than replacement. These activities might be regarded as mundane or universal, and might not be considered worthy of mention, especially if the actions are considered to be self-explanatory. Furthermore,

heirloomic artefacts tend to comprise more durable materials than the ephemeral functional categories, allowing for retention with the requirement for minimal intervention.

Disruption:

Aborigines learned over the course of 60,000 years how to enact a successful symbiotic relationship with their environment, an environment that some would describe as harsh. Unfortunately even the almost infinitely adaptable Aborigines could not contend with the forcible disruption to their culture engineered by the Europeans. The geographical relocation of many Aboriginal groups led to the loss of numerous production techniques and the erosion of many regional identities. The people were quite literally dislocated, perhaps the cruellest fate for a nation whose culture was inextricably woven into their "country". Without the landscape that held the key to their Dreaming, perhaps there could no longer be any access to the Dreaming for some, which would certainly make the manufacture of certain categories of artefact redundant.

Historically, preservation of material culture was limited to the curation of rock art sites and the concealment of some sacred artefacts in caves, trees or beneath rocks, where only those with authority could access them (Simpson; 2006, 158). These acts of concealment protected the objects from discovery by the uninitiated, but did not necessarily confer protection against damage by the elements, termites or bushfire (ibid.), or even theft (ibid.).

Since the 1970s, indigenous cultural centres have emerged to house unrestricted artefacts and to provide places for cultural renewal and the transmission of knowledge. This knowledge is conveyed through storytelling, songs and performances using the cultural property that is available.

The preservation of the cultural knowledge may take precedence over the preservation of artefacts, because these, to a large extent, can be remade. It is the information they

carry in terms of shape and symbols that is important for cultural survival (Simpson; 2006, 163).

Repatriated material is sometimes held in the cultural centres, but if there are appropriate custodians, of correct status, within the community, the preference is to entrust care to them (Simpson; 2006, 167). Sometimes indigenous groups own sacred ceremonial material that is restricted to use by specific initiates and cannot be kept on view like the unrestricted material. Some cultural centres incorporated locked rooms or cupboards where restricted material could be kept. However, if reserves of sacred material were large they might be transported to a dedicated 'keeping place'. 'Keeping places' vary from tin sheds to rammed-earth constructions. The more substantial keeping places confer most protection to the artefacts and are designed to withstand weather, insects, cyclones and ram-raiders (ibid., 167).

Comparison of Maori and Aboriginal cultures:

Both the Maori and Australian Aboriginal cultures centre their belief systems on ancestor worship, but despite the many similarities there are also significant differences. The Maori people were originally Polynesian islanders who travelled to New Zealand, from Hawaiki, in the tenth century and their distinct beliefs were very much influenced by this heritage, although these were amended to suit their new environment. The Aborigines, on the other hand, have populated Australia for tens of millennia, the uninterrupted population allowing beliefs to evolve slowly and almost imperceptibly through time. What unites the two groups is that the treatment of their material culture is influenced by religion.

Before Maoris were introduced to Christianity in the nineteenth century, leading to a period of religious uncertainty, their belief system had clearly defined prescribed rules. It was generally held that unexplained activities were related to the influence of gods or ancestor spirits. Anyone or anything said to be under the influence of the spiritual realm was in a state of "tapu". Attempts have been made to align the concept of tapu with taboo, but the nuances of the state render the definition unhelpful. A person in a tapu state might be under the protection of the gods, but also has imposed upon them restrictions regarding what they can do, eat or touch. In terms of artefacts it is sometimes necessary for a tapu state to be achieved so that the object is effective

at its task. Conversely under different circumstances an object in a tapu state could be rendered unusable. If this is the case it is not unusual for the artefact to be destroyed to release it from spiritual influence. Objects destroyed for this reason would be discarded.

In Maori culture most artefacts can be regarded as vessels for spirits. Therefore the object is retained as long as a desired influence is required, but should this end, or an artefact be inhabited by a malevolent spirit the object might be ritually destroyed to dispel the influence. One way to exercise control over the "atua" (gods / spirits) was to carve images of those from whom protection was sought. Carving was a potent Maori tool, since it afforded the people a measure of control. What is more it was a medium through which events were recorded, providing a symbolic pictorial history of the people. The continuous use of certain symbolic conventions allowed future generations to appreciate their history. By carving an event of the recent past it does not necessarily demonstrate a reverence of the past, but it does suggest a respect for culture, which in the future will manifest itself as respect for the past.

Since items that are touched or worn by a person tend to retain the owner's spirit, it is not uncommon for relatives of the deceased to keep personal objects such as walking sticks or jewellery. In this way the relatives are able to retain the spiritual influence of their ancestors. It would then follow that care would be taken of these objects so that the tapu is not dispelled. The collection of such heirlooms is only indirectly a sign of reverence of the past, since the retention of spirits keeps the vitality of the ancestor in the present.

The Aboriginal creation story is based on the Dreamtime or the Dreaming, when all the gods came into being and created land, people, animals and plant species. However, many Aborigines believe that the Dreaming is ongoing, which lends an temporal quality to their existence. It is believed that Aboriginal art is a means of accessing the Dreaming and making contact with the spiritual dimension. Since the Dreaming exists independent of linear time and present generations are still a part of the Dreaming, it does not make a great deal of sense here to discuss reverence for the past. However, what is clear is that the Aborigines do have a great deal of respect for

their ancestors, who aid their survival, and for the environment in which they live, which possesses many sacred totemic sites created in Dreamtime.

The land was imbued with spiritual powers and laws were established in the Dreaming to govern how the power could be harnessed. As Aborigines inherited specific tracts of land they were entrusted with the responsibility of undertaking designated rituals and ceremonies at thalus (sacred sites) to keep the land alive. The ceremonies were designed to direct spiritual forces to aid with the proliferation of animal and plant species that would ensure survival of the people. In such a harsh environment it can be appreciated that survival is intimately associated with the land, and when this is influenced by ancestors it is crucial to appease them. For the Aboriginal people, as hunter-gatherers, conservation of the land is all-important.

In Aboriginal culture many artefacts can be adapted, through painted design, to access the Dreaming and gain spiritual influence. Each tribe has a different ancestry and set of signs pertaining to the Dreaming and it is important not to reveal these to members of foreign tribes. Therefore if symbols are painted during ceremonies they are usually painted over or blurred afterwards to hide their channels to the spiritual dimension. In this way other tribes cannot benefit from the spiritual gifts or try to sabotage relations with the ancestors.

Towards the end of the 20th Century, greater consultation was reached between the Maori people and museum professionals, who had become guardians of taonga (cultural treasures) in museums, and bicultural policy was developed. Biculturalism has been instigated in the Museum of New Zealand / Te Papa Tongarewa, in Wellington, whereby Maori artefacts are conserved by Pakeha (people of European descent), in consultation with Maori museum workers. In this way the taonga can be treated in the most appropriate way. All conservation is carried out under the premise of tikanga (protocol), which involves consultation with the relevant iwi (tribes). Tikanga dictates a commonsense and respectful approach, that is very closely allied with notions of good conservation practice (Kreps : 2003, 70). One of the changes that has occurred in the museum is the restriction of food because the maui (life-force) of sacred items is made noa (neutralised) in the presence of cooked food. During

artefact treatment there are also restrictions placed on the consumption of food and drink. Other conventions must also be observed, such as not blowing on carvings or using saliva for cleaning, and carvings should not be stepped over. This protocol is established to help maintain the spiritual worldview of the people and objects (Kreps : ibid.).

For the Maori, taonga are living entities, with names, lineages and spirits and should be treated like people. Taonga are mediators between present and past, possessing links with both the living and the dead. The primary value of taonga is derived from their history and ancestoral associations, which bind Maori identity. Therefore, to the Maori, it is the spiritual dimension that is of most importance in terms of cultural preservation (Kreps : 2003, 71).

Survey Results for Aborigine and Maori Cultures

See Appendix 6 for definitions of the categories used in the charts.

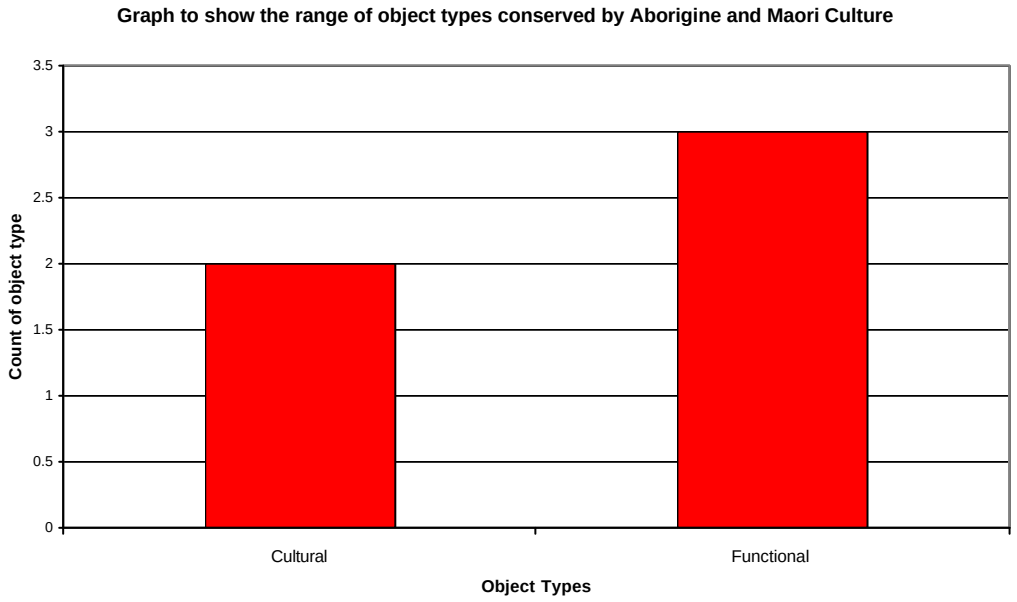


Figure 8:1

Figure 8:1 is a chart displaying the range of object types conserved by Aborigine and Maori Cultures. The only object in this set that belongs to Aborigine Culture is a functional wooden boomerang, so it would be more accurate to regard this as a reflection of Maori object treatment. The lack of Aborigine artefacts in the set

does relate to what is known about Aborigine artefact treatment. There are references in ethnographic literature to some repair of functional objects, but this activity seems to be limited. Both cultural and functional objects are seen to be conserved by Maori Culture.

Figure 8:2 is a chart depicting the reasons of Aborigine and Maori Cultures for preserving artefacts. All of the cultural objects have retained their value, but the functional objects have taken on cultural or personal value. The Aborigine boomerang has been broken and repaired, but the repair would compromise the functionality of the object, which is why it is regarded to have personal value. The Maori wooden canoe bailer and flax belt acquire cultural value through treatment, since these are status-giving objects, which transcend functionality when conserved.

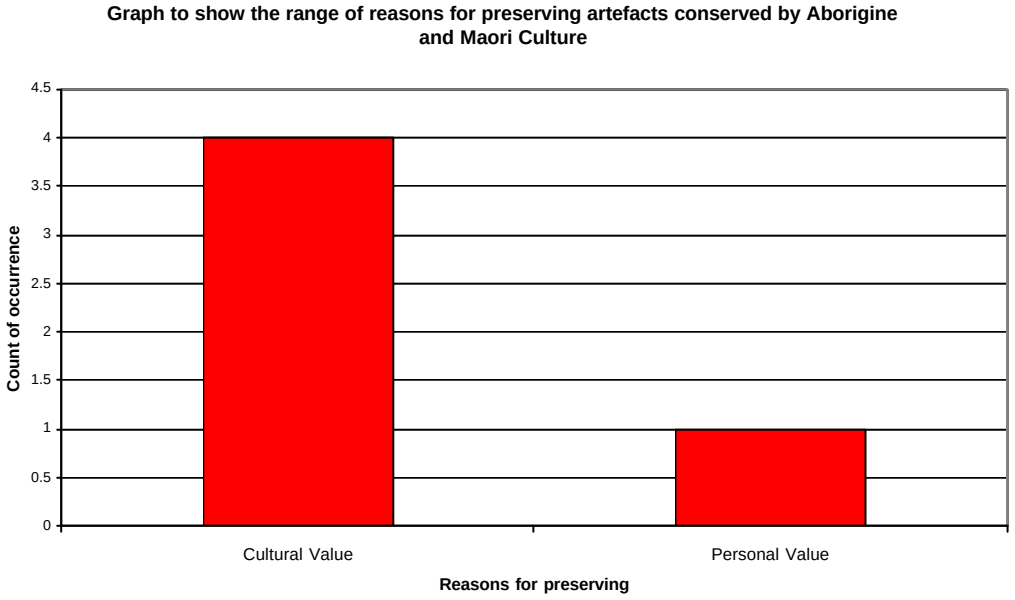


Figure 8:2

Figure 8:3 is a chart showing the range of materials conserved by Aborigine and Maori Cultures. Stone tends to be reserved for cultural (religious / ceremonial) objects, since it is a high value material and hard to work with native tools. The organic materials of basketry, bone and wood is a reasonable reflection of material culture assemblages that comprise high numbers of organic artefacts.

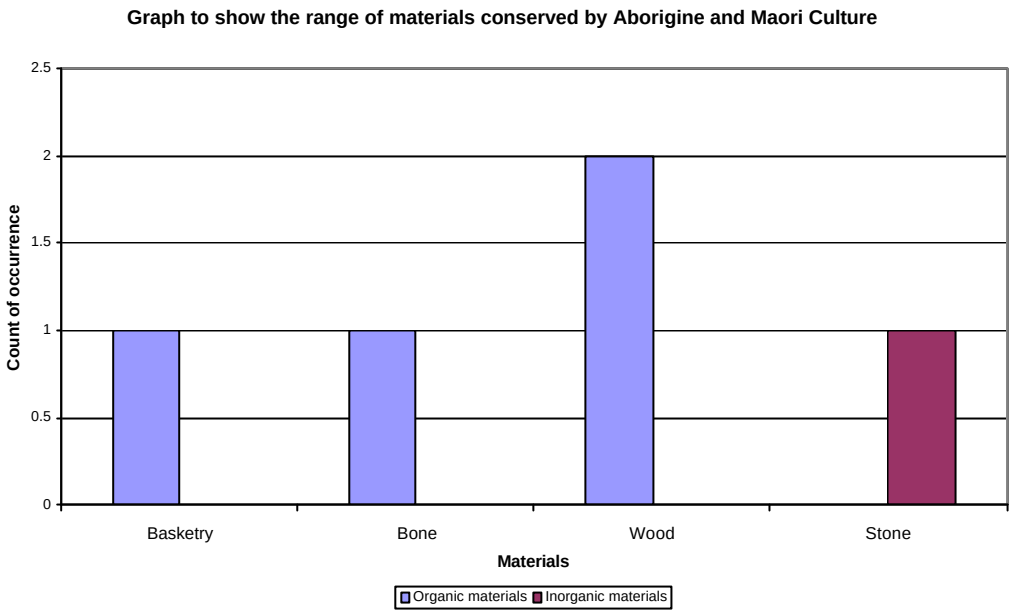


Figure 8:3

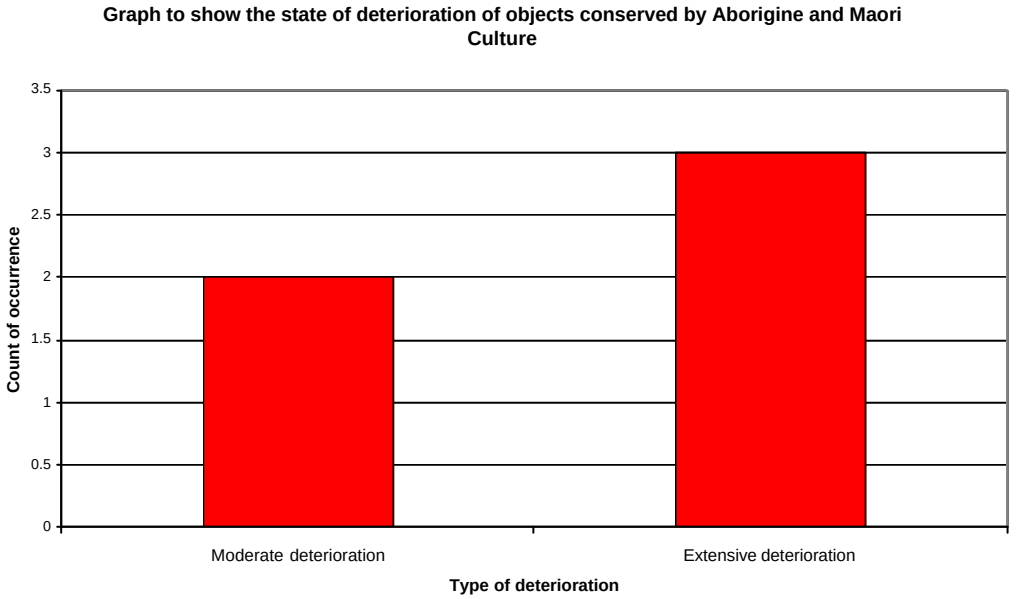


Figure 8:4

Figure 8:4 is a chart depicting the state of deterioration of objects conserved by Aborigine and Maori Cultures. The split is between moderate and extensive deterioration. Here these factors do not seem to have much influence on the treatment of the artefacts.

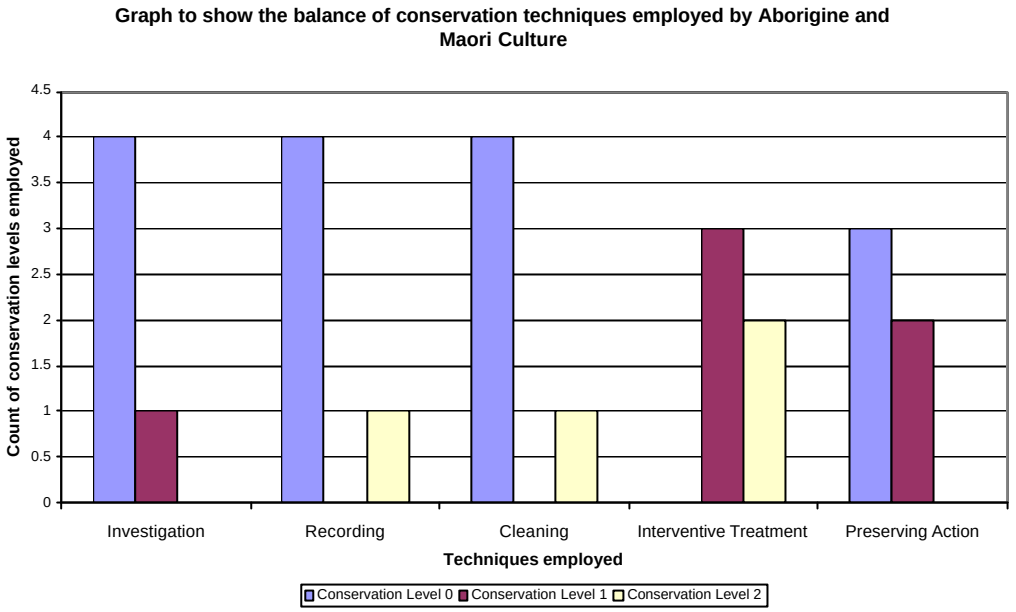


Figure 8:5

Figure 8:5 is a chart displaying the balance of conservation techniques employed by Aborigine and Maori Cultures. With the exception of the conservation applied to the bone *rei puta* neck ornament, which was undertaken at a Maori museum, New Zealand, in the twentieth century, there is no evidence for investigation, recording or cleaning. This is consistent with what is already known about the cultures. In addition to the *rei puta*, a flax belt is treated at interventive conservation Level 2, representing an effort to restore the original appearance of the artefacts – an importance factor in objects that have a role as status indicators. Both these items are also subject to preserving action (Level 1) to ensure a stable environment. The belt is removed from functional use and the *rei puta* kept in an environmentally controlled museum. The remaining artefacts undergo stabilising treatment, but nothing more. The *rei puta* is under Maori Culture, rather than Conservation Laboratory Culture, because it is an example of native conservation, albeit a modern one.

Chapter summary

What is conserved :

This small group of artefacts is split between cultural objects including a bone neck ornament and functional artefacts, including a boomerang, a canoe bailer and a flax belt.

Why have the objects been conserved?

The boomerang was repaired for a personal motive, since the damage, even after treatment, compromised the functionality of the object. The other items either retained their high cultural value, or gained cultural value through the act of conservation and improving the condition of the artefacts.

How have the objects been conserved?

The flax belt received extensive interventive treatment in order to restore its original appearance, as did the bone neck ornament. The neck ornament was conserved in recent times using techniques similar to those practised by Conservation Laboratory Culture.

CHAPTER 9
Conclusions

Introduction

The aim of the thesis has been to study a wide range of cultural groups and their artefacts in order to reveal any activities that could be perceived as conservation and to establish if there are common threads associated with attitudes towards conservation amongst the groups. Further aims were to discover what type of artefacts cultures retain, why they preserve and how they achieve this. The penultimate aim is to address whether or not conservation actually exists outside the remit of modern Western conservation. The ultimate aim is to develop a clearer understanding of the nature of conservation. It is here that I shall summarise what has been revealed through the tripartite approach of value hypothesis, cultural study and material survey, and draw the strands together to discover if a clearer understanding of the nature of conservation has been produced.

Conclusions from The Value Curve

The Theoretical Artefact Value Curve (TAVC) was developed in order to establish if it would be possible to predict when in an artefact's life it was likely to undergo conservation (if at all). It was recognised that an object needed to be regarded as "valuable", in order to be selected for conservation, which led to an examination of notions and perceptions of value. It was also observed that the "value" of an artefact tended to change over the course of time, through use and damage. Combining these observations the "value hypothesis" was created to describe how value(s) in artefacts changes over time and the TAV Curve was developed to chart the value changes.

A description of the curve can be summarised as follows: The first shoulder of the TAV Curve represents the **Functional Phase** of the object's life, which starts from the point of manufacture. During this period the artefact maintains its initial value attribution and fulfils its original functions(s). The next stage of the Curve, represented by a trough, is described as the **Obsolescence Phase**. This is the period during which the values of the object diminish through use, wear or redundancy (when the artefact is superseded by an improved model). Here the object is rarely

used for its original purpose and the utility (perceived "usefulness" value) is barely perceptible. Discard is likely to occur in this phase. If the object survives this period it tends to pass into the final stage of the Curve. **The Preservation / Conservation Phase**, representing the rising tail of the Curve is the period in which the object regains value through the assignation of new values. It should be noted that discard does not necessarily denote the end of an artefact's life, since the object might be excavated and conserved. If this occurs the object rejoins the last phase of the Curve.

Having established a hypothesis it was then necessary to try to test it, to reveal whether or not the Curve was followed by real artefacts. Utility is an abstract and subjective form of value, which cannot be quantified objectively. Therefore a measurable type of value was required for the testing of the Curve, leading me to financial value, since this was considered to be one of the few options available. Objects with a traceable history of financial value were sought for the purpose and Vintage cars and stamps fitted the remit. Both artefact sets had dedicated price catalogues. With the cars the financial value could only be traced through the catalogues for a limited period, which meant it was not possible to use them to test the whole of the curve. However, the car data did help to demonstrate the first two phases of the Curve. The stamps, by contrast, seemed to avoid an **Obsolescence Phase**, but clearly showed the **Preservation / Conservation Phase**. With the two data sets it was possible to prove that objects do move through the different phases of the Curve.

The higher values ascribed to objects in the final phase of the Curve are based on the cultural constructs of association and rarity. The placing of conservation activity at the end of the Curve is also a cultural construct of modern behaviour, since it precludes the notion of conservation being applied at any other stage of the object's life. In actual fact artefact repair is often witnessed in the **Functional Phase** of the Curve. This treatment is a conserving act, but if it is applied to functional objects it is not usually regarded as Conservation. When attempting to reach a clearer understanding of conservation it is important not to dismiss activity that *could* be perceived as conservation.

Different applications of the TAV Curve

The TAV Curve, as it appeared in the Value Chapter, is an idealised curve that best represents the changes of value in the life of a functional artefact. At the beginning of a functional object's lift with its original owner, its value would start relatively high, because it represented maximum utility to the user. Over the course of time this value would decrease, through the occurrence of wear and tear or the availability of a replacement object with a higher degree of functionality. The object would trace its inevitable decline into obsolescence. It is possible that towards the beginning of the curve, conservation attempts might be made to repair damage, but over a further period of time the object would slide into the trough of obsolescence. It is at this point that the owner is likely to abandon or discard the object (see Figure 9.1).

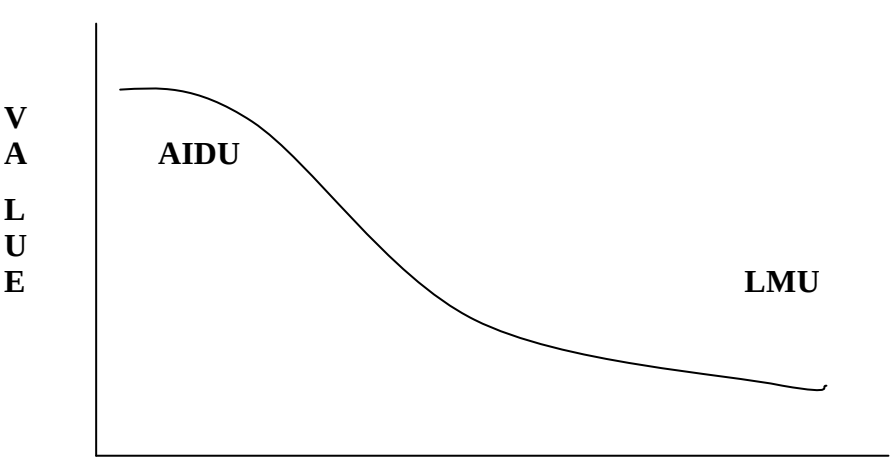


Figure 9.1

If the object survives, the second part of the curve might transpire, where a new owner with a different worldview takes the object on, recognising a value or value potential beyond functionality (which has been eroded). In the case of a functional item, the value attributions most likely to be applied in the second phase of the object's life are educational value or cultural value. In the first instance, the object is perceived to be a source of information – a historical document that provides evidence to support existing knowledge or create a novel synthesis. There are occasions when cultural

value could be interpreted, such as in the case of a high class dress accessory (for example a Maori flax belt), that has been damaged. The belt would act as a status indicator if restored to its earlier appearance, and so conservation effort is expended to achieve this end (see Figure 9.2).

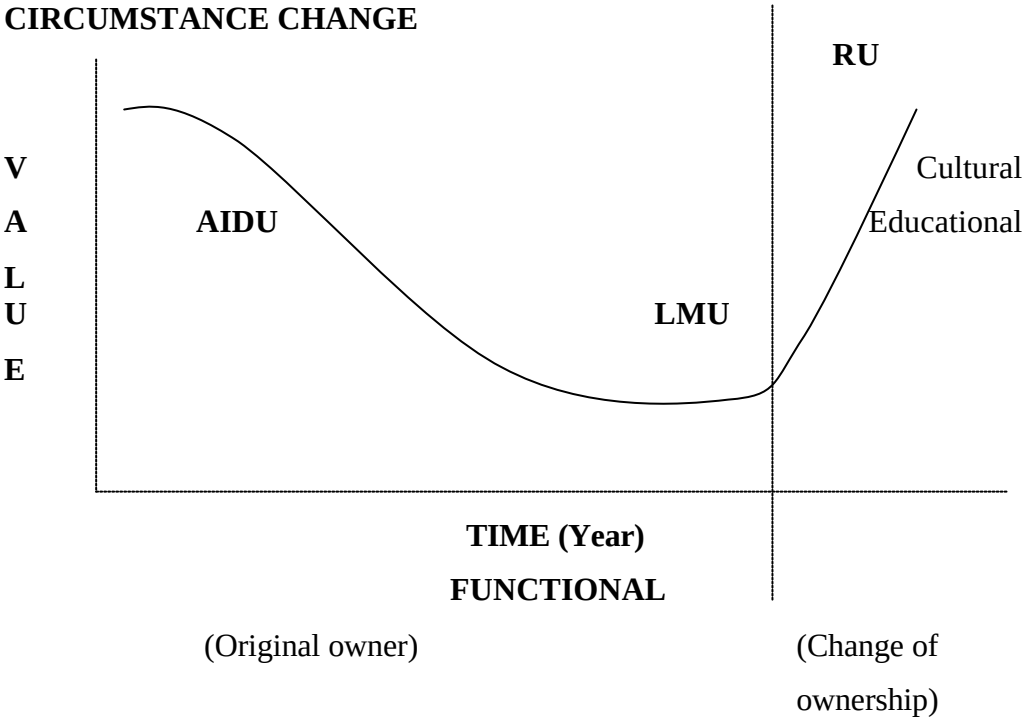


Figure 9.2

The Curve can also be used to describe value changes in order types of object. Artefacts that have been created to perform a cultural or aesthetic role can be described on the same curve, since aesthetic value can be subsumed under cultural value. These items often have a higher starting value than functional objects, and so not follow the same dramatic drop in value, but rather fluctuate slightly up and down in the course of their lives (see Figure 9.3).

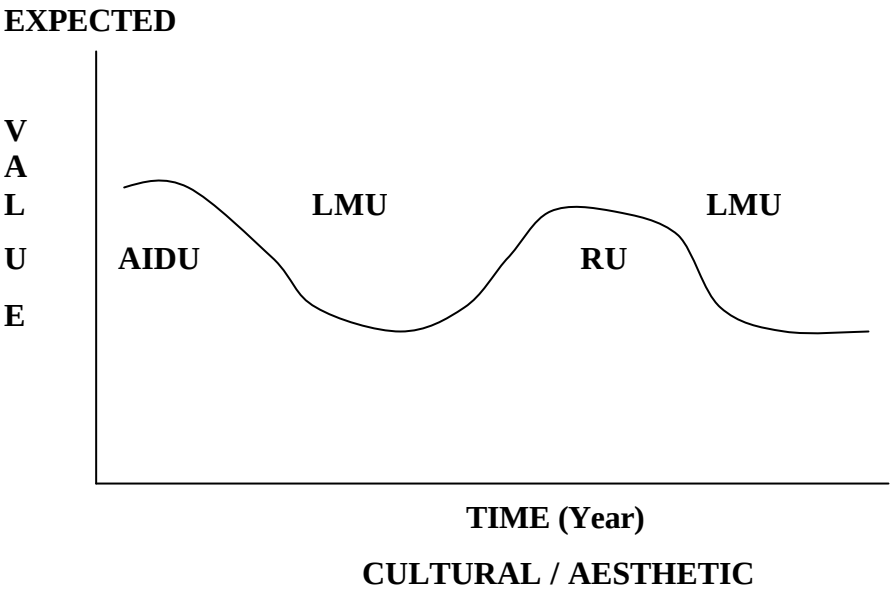
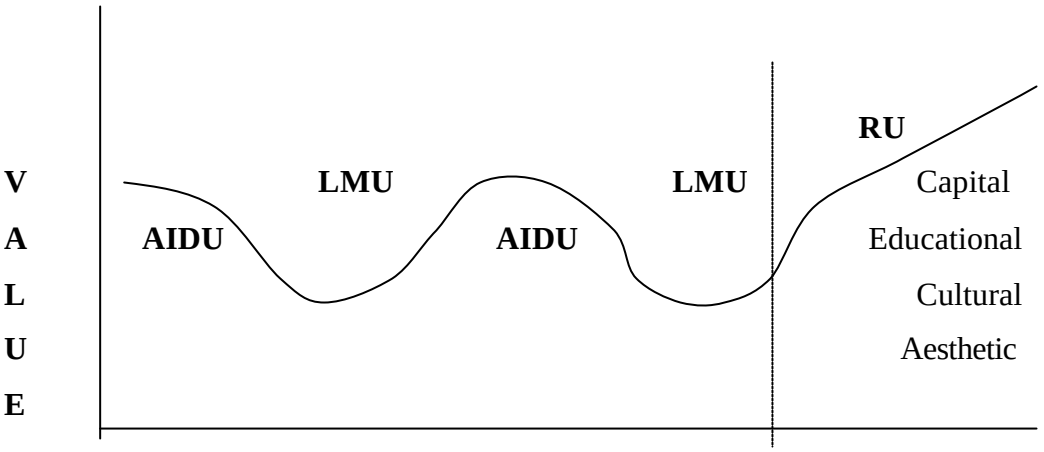


Figure 9.3

Since such objects can act as status indicators and hold their value well, they are sometimes owned for long periods of time. Over the course of time, changes in fashion and social attitude can leave a slight loss in value, but this is recovered as the wheel of fashion turns full circle. Since value remains relatively high throughout the object's life, there are many opportunities for conservation to be applied should the artefact require intervention. If the object is exchanged at a later stage, the perceived value may rise as new worldviews are applied (see Figure 9.4).

CIRCUMSTANCE CHANGE



TIME (Year)

CULTURAL / AESTHETIC

Figure 9.4

There are, however, some exceptions to the cultural value, in the form of modern art (see Figure 9.5) and auto-destructive modern art. New modern art can possess a relatively low value, especially if an artist is not well-established. Upon exchange it is possible for the value to rise quite rapidly, especially if purchased by a savvy collector. If the collector is able to secure display of the artefact in a prominent gallery, the status of the piece will increase, along with a subsequent exchange price. This exemplifies that artefacts can gain in value before they potentially fall.

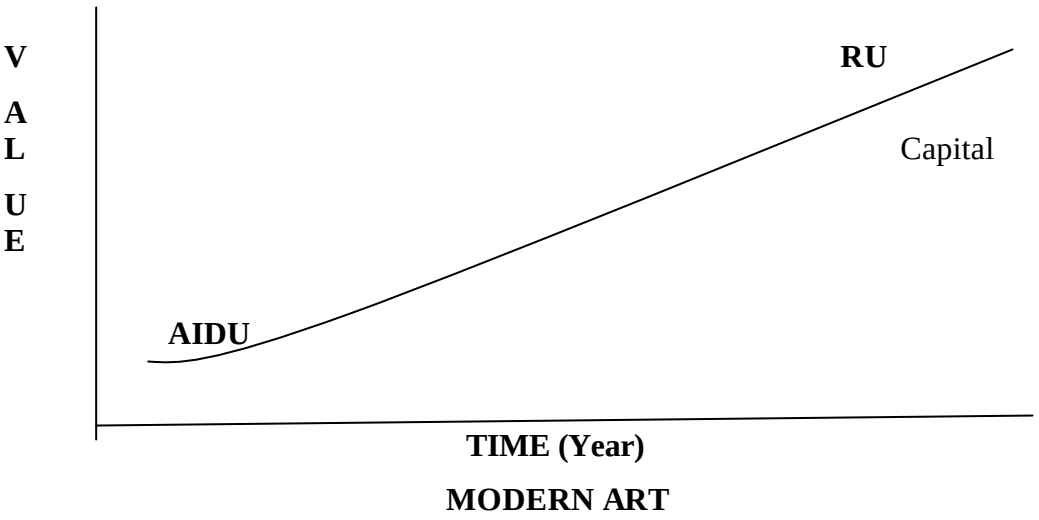


Figure 9.5

Auto-destructive modern art is a very different phenomenon (see Figure 9.6), since it has been designed to perish and eventually lose value. When such an item is purchased and displayed it gains in value, but the inevitable physical destruction of the object means that it loses value without the influence of external factors (for instance, fashion).

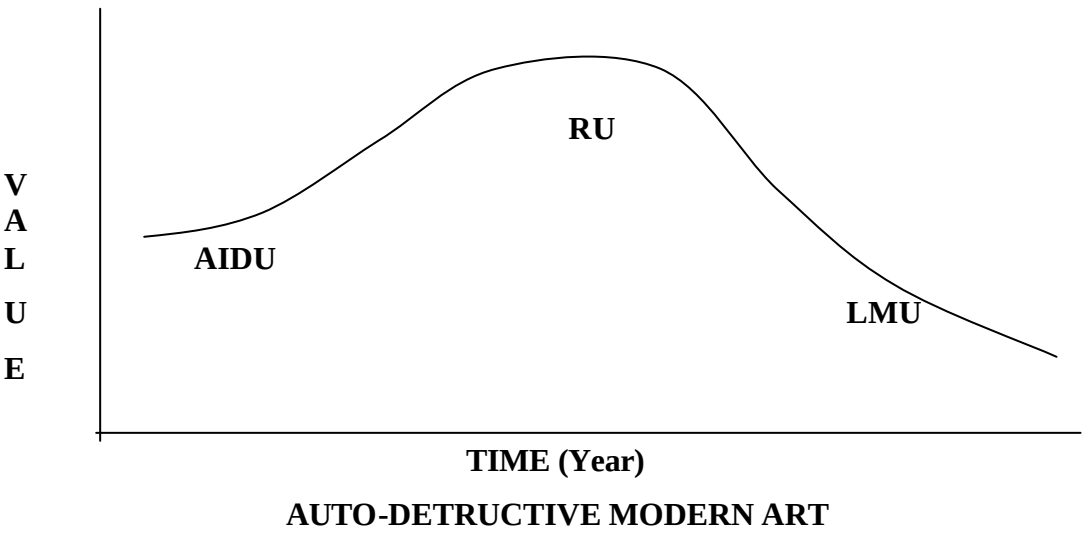
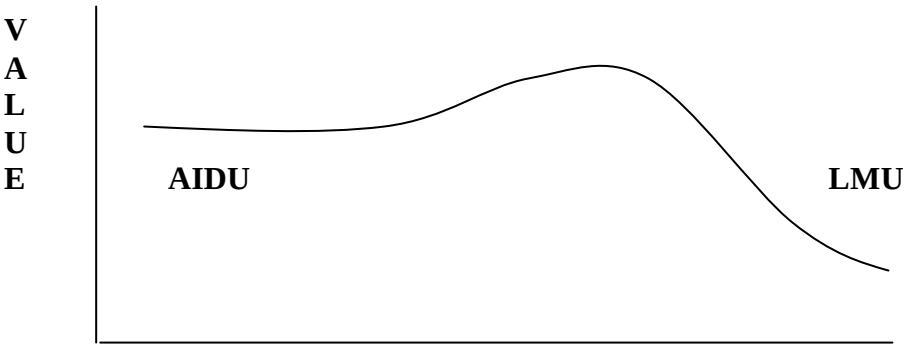


Figure 9.6

Objects created with a commemorative role fulfil a similar curve to functional objects. The differences are that the starting value is usually relatively low and this does not

alter greatly. Upon acquiring the object, the value to the owner will rise as they apply their personal narrative. The personal value can be sustained for a while, but if the owner's memory fails or they die, the value will fall (see Figure 9.7).



COMMEMORATIVE

(One owner)

Figure 9.7

If the object is taken on by another person, the value will rise as they project their own values onto it. Commemorative items tend to be curated by their owner – constantly cared for, and so there is no point at which conservation is likely to be applied (see Figure 9.8).

CIRCUMSTANCE CHANGE

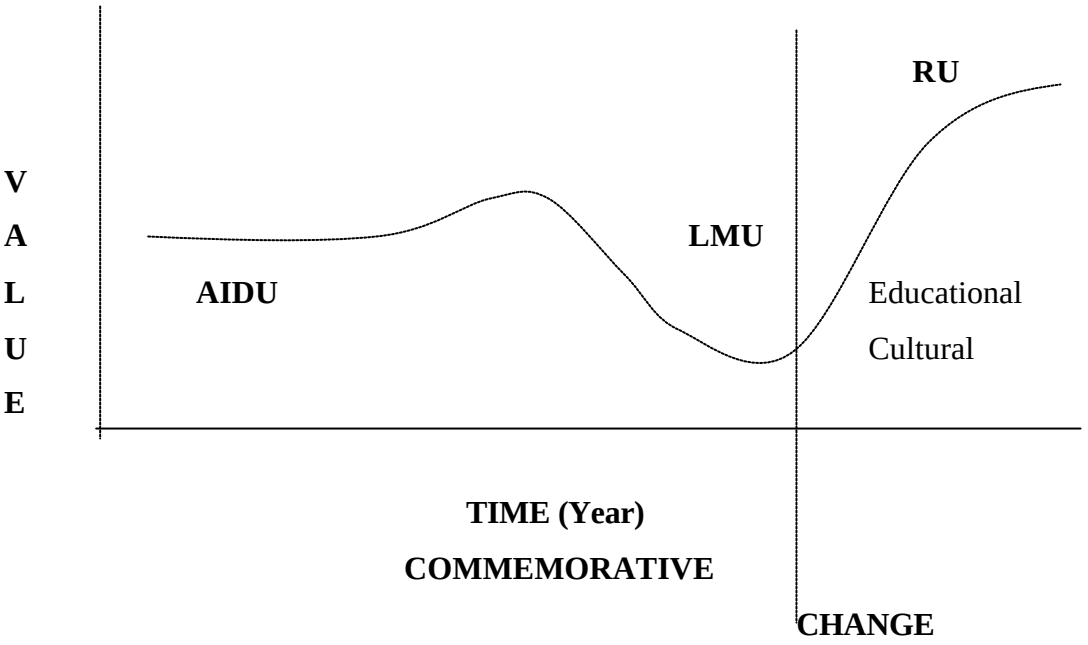


Figure 9.8

Conclusions from The study of Cultural Groups

Drawing together what has been revealed from the study of the individual cultural groups, it is possible to make a number of conclusions about the care and conservation of material culture. Nomadic Hunter-Gatherer groups, such as the Australian Aborigines and some of the Native American tribes possess fairly limited material culture assemblages, since regular movement between dwelling places makes it impractical to move around large numbers of artefacts. The objects that these groups do own tend to be highly functional, with some artefacts performing multiple functions. Some functional Aborigine objects can even be temporarily transformed into sacred objects, by the application of sacred designs. After ceremonial use the designs can be altered, or expunged to return the item to secular functionality. In Hunter-Gatherer societies ideas, often expressed in relation to religion are, or can be, more important than physical objects. Belief itself is expressed through ceremony and ritual accoutrements for ceremonies are often made, when required, from surrounding materials. At the conclusion of the ceremony the artefacts can be disassembled and the component parts returned to nature. In cultures where survival is determined by

the caprice of nature, religious deference is often paid to the natural world and sacred sites often exist in the landscape, linked to reproduction in nature, and hence survival.

There is little use for ancient artefacts in Hunter-Gatherer groups, since all-important sacred knowledge is passed on through oral tradition and the reproduction of sacred symbols that are painted on artefacts or on the body, in preparation for ceremonies. Sacred knowledge is usually distributed between group members and passed on through familial affiliation. In this way the group are compelled to work together for survival, since each member contributes a vital piece of sacred knowledge. Since many objects are remade when required, there is minimal evidence for care and repair. However, in Australia, there are examples of cave paintings that are repainted. Sometimes faded figures are retouched, to reinvigorate the spirits that they represent. In other instances existing designs are over painted with different symbols, which might appear to an outside culture that the old designs are no longer valued. Yet this is not the case, since the new designs link with the old in a multi-dimensional palimpsest, reaffirming the power of the old and adding to the layers of history.

More sedentary communities, such as the majority of Native American groups and Maori culture, tend to retain some objects to support their belief systems. There is evidence of care and repair of functional artefacts, since some of these items require a significant investment of time in their manufacture. Therefore, repair to return functionality to a damaged object is considered to be a good investment of time. Objects in these cultures are invested with the spirit of the maker, which is one reason that individuals tend to produce the functional items that they will use. A similar idea extends to women making artefacts that women will use and men making male artefacts. This rule can be broken when specialist craft skills are required for the manufacture of artefacts. It is believed that when a person dies, the part of their spirit with which their possessions were inculcated remains. This is why family members sometimes retain favourite possessions of their ancestors, since it keeps their spirit close.

Some sacred objects can be deactivated outside of ceremonial usage, thus removing the danger they could pose to uninitiated people. The same artefacts can be reactivated, usually through some form of physical transformation, such as the

painting of sacred symbols. Especially in some Native American groups, the appearance of sacred objects is linked to their efficacy, so it is extremely important that the knowledge of actions and appearance is retained. Some Native American sacred artefacts are designed to be sacrificial, for example specific animal carvings, which become charged with disease or evil spirits. These objects are hidden, to keep people from danger and are not designed to be preserved.

Ancient Egyptian culture and Roman culture represent social groups with highly developed and stratified material culture assemblages. These societies undertook limited functional repair, probably because the value of most damaged functional artefacts was so low that they did not merit conservation. The value dropped so low, because these were resource-rich societies and object replacement was less expensive (time-wise) and more convenient option. There are examples of the reuse of broken ceramic vessels as games counters and lids, which is further evidence for the lack of conservation. However, there are examples in both cultures, of the conservation of high-value functional objects, such as Samian bowls that are riveted, and the travertine vessel that was tied together. These, however, are exceptional and their preservation is likely to be related to the existence of secondary "cultural", or symbolic value. The artefacts were functional status pieces and once broken, could be fitted back together to continue this role. These transformed items could be considered to possess personal value.

These societies manufactured dedicated religious objects, such as statues, altars and grave goods, designed to support the belief system. There is evidence of repair to statues, which is related to their high symbolic or aesthetic value. Many religious objects from these cultures were made from high-value materials, such as marble and precious metals, which incidentally took effort and skill to craft. Therefore repair would often be preferable to creating a whole new artefact.

Regimental culture represents some of the more recent cultural traditions. In this social group functional objects were cleaned and repaired to maintain optimal functionality and readiness for battle. Here, lack of conservation could have fatal consequences. Cleaning, however, played a pivotal role in Regimental cultural traditions, being used to instil discipline and foster *esprit de corps*. Some objects of

myth support, such as Regimental Colours, were not cleaned or repaired, since the damage was the proof of heroism in battle and cleaning would expunge that proof. Other objects, however, were over-cleaned, such as medals. Medals were highly representational objects, which were supposed to be bright and tarnish free. Maintaining the appearance is an act of reverence and helps to keep alive the memory of heroic deeds. It does not matter that the act of cleaning can cause damage. These are items of physical proof, the essence of which cannot be harmed through cleaning.

The role of physical proof continues into twentieth century society, where it is deeply ingrained in the belief system of the group. Physical evidence is used as proof in criminal trials; it has been used in museums of archaeology to demonstrate the ancient past and as proof of "otherness" in ethnographic museums. Physical evidence has been used as a means of classifying and categorising the natural world and also as proof of the intangible notion of "good taste", as evinced by the Victoria and Albert Museum, which set out to demonstrate taste through objects (Pye:2001). National museums, since the eighteenth century, have employed the use of physical evidence for the proof of national identity (Ibid).

From the study of the cultural groups it can be concluded that objects are cared for and repaired for three fundamental reasons, and even though these are manifested in different ways in different cultures, underlie all ancient objects that are conserved:

1) **Function:** This is when an object is cleaned or repaired, so that it can continue to carry out its intended role. For example, knives are sharpened, and holes in garments are mended. Even aesthetic objects can be cleaned to maintain their beauty and fresh appearance. For example, there is a great tradition of cleaning the Sistine Chapel, which started early in the history of the chapel, since the importance of its appearance was appreciated from its inception (Caple: 2000; 100-105). Therefore, it could be argued that cleaning works of art is an act of conservation to maintain their aesthetic function.

2) **Myth support:** This pertains to objects that represent physical proof of a culture's belief system, for example pieces of the true cross or war trophies. In the action of cleaning or repairing such artefacts, the conservators are

supporting the belief system. The effect that the cleaning has is not important, since it might actually cause damage, but the maintenance of a recognised appearance is vital. The cleaning almost enhances the visibility of the object, thus emphasising its physicality, and enhancing its role as proof of the belief system. Almost all religious and symbolic objects perform the role of myth support and associated conservation activities may be invested with symbolic rituals. Cleaning or repainting might be viewed as the renewing and reinvigoration of the object. When cleaning and repairing become religious activities these are usually carried out by initiates or other specialised, selected people.

3) **Personal heirlooms:** These are mementos, which are usually small, personal objects with a tangible link to the past, for example Grandfather's medals. Personal heirlooms feature in almost all cultures and can be owned by any free member of a society, regardless of wealth or rank. Small amounts of care and repair tend to be associated with these objects, which retain their value for as long as they evoke the memories they were kept to provoke. Personal heirlooms may well be damaged or incomplete, due to their age, but this does not detract from their intrinsic value, which is intangible. In other words, these objects are physical stimuli that evoke memories.

When objects from these three object categories are projected onto the TAV Curve, it can be seen that the functional role and personal heirloom occurs primarily at the early part of the curve, in what has been dubbed the **Functional Phase**. The role of myth support can appear at both the beginning and the end of the curve, since some objects are manufactured to perform the role and others acquire the role.

Conclusions from The Survey

The structured questionnaire and survey were designed for the gathering of information on material culture conservation activity from a wide range of cultures. After a design and testing period, a paper-based questionnaire and instruction booklet were produced, allowing conservation data to be gathered through the analysis of published and written records, pictures or photographs of artefacts and artefacts themselves. The data were gathered throughout the course of the study for this thesis.

The data from the questionnaire forms was entered into an Excel spreadsheet, in preparation for analysis of the dataset. Charts were produced to illustrate the conservation activities undertaken by the specific cultural groups studies in this thesis. The results of the survey are discussed in Chapters 3 - 8.

The survey results revealed a range of information about conservation practice and how the value of artefacts fits into the framework of conservation. One of the most visible outcomes of the survey was the demonstration that Conservation Laboratory Culture, the group representing modern conservation practice, was the only culture to create conservation records or to undertake object investigation or analysis. The consistent evidence for recording and investigation make it possible to conclude that these elements are important methodological stages in the modern practising of conservation. Contemporary conservation literature and codes of ethics also attest to the fact that analysis and recording are integral to the ideological and practical framework of modern conservation.

The presence of recording and investigation helps to define modern conservation, in the same way that the action of cleaning is pivotal to the understanding and appreciation of conservation in Regimental Culture. A high level of cleaning is characteristic of Regimental conservation and also of the cultural traditions of the group. For Regimental culture, cleaning artefacts is closely associated with survival, discipline and *esprit de corps*, which means that conservation practice, in relation to the group, is embedded deep within the cultural rituals of the society. Although cleaning is associated with most aspects of Regimental material culture, the action can have different applications. For example, the cleaning of equipment and weaponry is for the purpose of maintaining functionality. The cleaning of uniforms can be related to discipline, since it is a routine task that has to be carried out in accordance with strict standards. However, the focus on cleaning uniforms ensures a smart appearance in which members can develop a sense of pride and the unifying nature of the uniform itself contributes to the notion of *esprit de corps*. Cleaning of medals and trophies adds a further dimension to the practice, since these objects can become worn through repeated cleaning, thus causing a loss of surface detail. Medals are highly representational artefacts and it would seem that wear is considered to be an acceptable consequence of maintaining the cultural value of the medals. New medals

comprise bright, shining metal surfaces, which constitutes their intended appearance. In order to preserve this aspect of the appearance and keep alive the memory of the deeds that earned the medals, the objects require eventually detail-effacing polishing. To allow medals to develop corrosion patina would indicate a loss in the cultural value of the artefacts, since it would seem that the heroic deeds that they represent were being forgotten.

Medals can be perceived as items of myth support and appear in this survey because they pertain to the conservation methods practised by Regimental Culture. With the profound emphasis on cleaning it would be easy to make the assumption that all Regimental artefacts were cleaned, which would be an inaccurate conclusion at which to arrive. There are further items of myth support, such as Regimental Colours, battle trophies and battle-damaged personal belongings, all of which are preserved by Regimental Culture, but underrepresented by this survey. The reason for this is that they are "hidden" examples of preservation and do not fall under the remit of the survey, since the items are preserved in the sense that they are collected and kept. They are not often cleaned or treated, unless they are on the verge of disintegration, because the dirt and damage that is in evidence is related to the cultural value of the objects. The deterioration is part of the history of the objects – proof of events that have taken place – and if the damage should be repaired it would expunge the evidence and destroy the value of the artefact as an object of myth support. This information was learned through study of the culture and was independent of the survey. This demonstrates the importance of separate cultural research, since the survey is unable to reveal everything that there is to know about artefact care.

So far there has been discussion of the conservation traits that distinguish specific cultural groups, but there are also trends that unite cultures. There are examples from all the cultures studied, with the exception of Regimental Culture (see above), of artefacts receiving treatment in an attempt to restore the original appearance of an object. This phenomenon tends to be applied to artefacts possessing primary aesthetic value or primary cultural value. In the case of the former category, aesthetic objects are valued for their appearance, therefore if this is damaged the primary value is diminished. In order to restore the value the appearance itself must be restored. The explanation for the restoration of appearance in cultural objects is more complex,

because the definition of "cultural" used here applies to "symbolic function" and symbolic artefacts can be found in a variety of contexts within a society – a cultural object might be sacred or political, for example. If an object confers status it is likely to be a very visual item, with the status inextricably linked to the appearance of the artefact. Damage to the object could result in a loss of status, in which case restoration of its appearance is crucial. In some cultural groups, for example Native American Culture, the appearance of religious objects, such as healing ritual paraphernalia, is linked to efficacy. If the visual appearance is altered the power of an object can be lost, which is a very compelling reason to restore its original appearance.

The survey has revealed that by the time of conservation objects have often changed their primary value attributions. Although this is not always the case, since in Regimental, Roman and especially Native American Culture there are examples of care and repair in functional artefacts that appear to be undertaken in order to maintain the functionality of the objects. These conservation episodes are likely to occur fairly early in the life of the object, which would correspond with the **Functional Phase** of the TAV Curve. In the TAV Curve it was hypothesised that value reattribution and conservation would occur after a period of obsolescence. Yet there is evidence here to suggest that that period could at times be very brief, almost to the point that value reattribution occurs almost at the same instant as loss of functionality.

A good example of this is the broken Egyptian travertine vessel. It is repaired soon after the episode of damage and is assigned cultural value. The swift reattribution of value was possible because the artefact possessed layered values, with cultural value existing just below its primary functional value. When the functional value was dramatically reduced (through breakage) the cultural value was expressed, meaning that it possessed sufficient value for immediate conservation. Artefacts that do not possess secondary values are more likely to have to pass through the obsolescence phase before gaining alternative value.

For objects to be conserved they must possess value, but that value (or values) can extend beyond the physicality of the object, with the artefact acting as a vessel for meaning and value, where occasionally the condition of the object is secondary and

damage is allowed to occur, as long as the vessel is not obliterated (e.g. Regimental Culture). Objects that possess layered values, or multiple values that are simultaneously visible, are probably more likely to be conserved than objects that have only one value attribution, since the sum total of the "utility" of the former category is greater than that of the latter.

Conclusions from the whole work

The conservation (care, cleaning and repair) of objects occurs towards the beginning and end of an objects life, when their "utility", or value use to society is high. Functional value is usually valued at the beginning of an object's life, unless an object is created to perform a symbolic role, for example a dedicated religious artefact. As objects age and sometimes become divorced from their original contexts, both their role and their value to society can change. Often the primary value of aged objects is symbolic, such as with objects of myth support or personal heirlooms. The value is related to religious association or the past and is projected onto the object by a society. The subjective nature of the projection can mean that interpretation of the value of the object, by social outsiders, can be difficult to determine.

Conservation of functional objects is usually recognised to be an attempt to reverse or lessen the effects of damage, which would also coincide with the general perception of "conservation". Yet the treatment of myth support objects, which can include over-cleaning and the addition of protein-based libations, such as blood (although the two do not usually occur together) can actually cause damage to the object. However, provided that the artefact is not destroyed by this process, the damage is incidental and it is the act of veneration that is important – the ritual support of the myth represented by the physical object. The treatment of personal heirlooms cannot be generalised, since this category of object is cared for according to the laws of individuals and is not dictated by societal norms. There does tend to be some evidence for cleaning and repair, but this is likely to be limited, since the artefact loses meaning and value if it is altered to the extent that the memories it should evoke are expunged.

For societies and social groups, such as Conservation Laboratory Culture, that have been influenced by the Age of Enlightenment, the "truth" supplied by physical

evidence has become tantamount to a belief system. It is perhaps not strange that modern conservators can be compared to proponents of myth support from other cultures. Conservators are also specially trained people, who use ritualised behaviour and culturally approved treatment techniques, to ensure that the primary value of objects, which here constitutes "evidence of past activities", is not lost. The information revealed is preserved in conservation records.

The golden thread

One of my research questions was to establish if there are common threads associated to material culture treatment and attitudes towards conservation that link the groups. All the groups that were studied demonstrated some level of care towards material culture. Yet the degree of effort seemed to vary between cultures. The Australian Aborigines, it could be suggested from the evidence, do not expend much effort on acts of conservation, since functional and even spiritual objects can be remade when necessary. Yet religious artefacts that are kept, are placed in protected hiding areas and latterly in designated keeping places. This 'curation' does not necessarily ensure the protection of the objects, since it is more for protection of people from harm that could be caused through inappropriate contact with the sacred items. What is most important to the Aborigines is transmission of culture, which can be achieved through means of symbolic designs on artefacts that are culturally encoded information. Yet it is the information and not the object displaying it that is important – objects can be replaced.

This view is almost diametrically opposed to that of Conservation Laboratory Culture, where the physicality of the object is valued as historic evidence. The apparent desire to make artefacts last indefinitely is also in opposition with Aboriginal worldviews, since the longevity of physical objects bears little relevance. If Aborigines expend the least conservation efforts, then Conservation Laboratory Culture (unsurprisingly) expends the most. The knowledge-based belief system to which this group adheres demands that investigative analysis is undertaken before treatment methods are applied, and that records are kept of the progress. Notions of minimal intervention mean that cleaning levels and treatment levels are more sparingly applied than in many of the cultures, whereas conscious preserving action is more prominent. Conservation Laboratory Culture stands alone as a proponent of scientific

conservation and the other groups resemble more the aesthetic school of conservation, whereby the appearance of the object is vital to its efficacy as a cultural object. This philosophy leads to more interventive treatment and cleaning in order to restore the damaged appearance of an item.

In fact, all the groups outside of Conservation Laboratory Culture have more in common with each other than they do with modern Western conservation. What applies to all groups is that the conservation actions chosen are deemed culturally appropriate by the group undertaking the work. This has proved to be problematic in recent times, since Western museums contained many artefacts from other cultures (as evinced by the results of the questionnaire for Conservation Laboratory Culture).

The appropriate treatments, from the group's point of view, is the application of scientifically tested techniques, that will yield the desired result of preservation. This does not take into account that the object being preserved might belong to a culture whose worldview determines that the same object should deteriorate in order to release its spiritual power.

By the end of the 20th Century, 'modern' conservators were beginning to show awareness that cultural sensitivity is a vital component in the care of material culture. Until this point there had existed a sort of scientific imperialism that mirrored the cultural imperialism that had caused the conflict in the first instance. Conservation Laboratory Culture had to begin to accept that science did not hold all the answers to the conservation of cultural property.

Channels of communication have opened and there is now a two way flow of information where Conservation Laboratory Culture and non-Conservation Laboratory Culture can benefit from new perspectives. The Bicultural Policy developed in New Zealand is an excellent example of the fusing of approaches that could lead to the attainment of best practice in the truest possible sense, i.e. practice that is sympathetic to both cultures.

We now know that all societies conserve culture, but that sometimes this is intangible culture rather than physical evidence. We also know that societies conserve objects to

support their belief systems and that even in all the permutations this could entail, there are three types of object conserved – functional, myth support and personal heirloom.

It has been demonstrated that common threads run through many conservation systems, but that the belief system of Conservation Laboratory Culture has somewhat isolated the group. Yet the need for cultural sensitivity and transparency means that there is likely to be a stronger correlation in the future.

As to the question of whether or not 'Conservation' (as defined in the Introduction) exists beyond the remit of 'modern' (Western) conservation, it could be argued that the answer is 'yes', since there is evidence of deliberately applied intervention that is undertaken to preserve cultural property from decay; and that the treatment is culturally appropriate and applied by a member of the social group with the appropriate social rank. One could also suggest that the required technical investment exists in the cultural transmission of preserving behaviour through instruction and repeated observation. However, it one was to question whether 'modern' conservation was emulated by other cultural groups, the answer would be 'no', because the belief system of Conservation Laboratory Culture is unique.

The interaction of Conservation Laboratory Culture with different conservation cultures will continue to present challenges for the modern conservator in the future, but it is hoped that by focussing on the 'golden threads' that run through these differing belief systems, these differing perspectives can be successfully reconciled, and sympathetic conservation solutions will be found to the satisfaction of all interested parties.

APPENDIX 1 - QUESTIONNAIRE CONSTRUCTION

This appendix sets out the construction of the questions from the structured questionnaire:

The construction of the structured questionnaire:

The order of the questions is set out below. A box was provided, at the top of the form, for the addition of a record number. Since I was to undertake the data gathering myself I designated the first form number "1" and continued sequentially, which enabled me to keep track of the progress of the data collection. If the survey had involved other collectors, an alternative numbering system would have been devised to accommodate the multiple inputs and to avoid duplication. Beneath the record number box, to establish the source of the data, were placed four tick boxes, with the options of "object", "written record", "published record" and "picture". The instruction for this section was to tick as many boxes as were relevant. Following this were boxes for the numeric code for the culture undertaking the conservation, to be selected from the culture tree in the instruction booklet (see Methodology) and a larger box for a description of the culture, which could be used to qualify the code choice. Next were two further boxes for the code number of the cultural group from which the conserved object originated. The procedure for filling the boxes was the same as for the conserving culture. This would help to establish the presence or absence of inter-cultural conservation. The subsequent question asked who took responsibility for the object and required a one-letter code to be selected from the instruction book. There was an additional box for further detail, if known. This could potentially reveal information about the relationship between the party controlling the artefact and its conservation.

The following questions asked for the reason the object was preserved and type of object preserved. The optional answers were designated single letter codes and were related to the perceived value of the artefact. The answers were chosen to be "value" attributions, because one of the aims was to establish the link between value and conservation. One problem with these answers is that perceptions of value are subject

to cultural conditioning and different individuals might view the value in a different fashion. In order to make the answer selection more objective clear definitions of the different categories of value were provided in the instructions. This is the sort of answer that is difficult to establish by looking at an object on its own, out of context, unless it is an artefact from one's own time and culture. For this reason it was clear that, when applying the questionnaire to objects, I would need to seek objects with some additional contextual information. There was an additional box, placed alongside these questions, for a description of the artefact. This supplementary information helps to place the form answers in their own context and is useful to other parties who might wish to re-evaluate the information.

The next question asked for a list of the materials of which the object comprised. There was an opportunity to fill up to five boxes, if the object was composed of several fabrics. The list of materials in the instruction booklet was as comprehensive as possible, with some similar materials subsumed under one category. The reason for this was to contain responses, so that alternative words were not used for one material. The options were expressed as two-letter codes. The first box was to be filled with the material present in greatest volume, and any subsequent boxes, in diminishing order. It was considered that allowing for more than five materials would make the dataset too cumbersome and five materials should provide an adequate impression of the composition of most artefacts.

Following material composition was a question about the deterioration of the artefact. It was considered useful to know the state of deterioration before the artefact was conserved and if there was any evidence of damage after conservation (especially if much time had elapsed since the conservation episode). It is not always possible to establish at what stage deterioration occurred, which is why a further box was added to allow for an "either or" response. The deterioration options set out in the instruction booklet were two-letter codes. The next question asked who conserved the object and again possible answers comprised two-letter codes. As with the type of object and reasoning for preserving the artefact, this is a difficult question to answer without some contextual information. In other words, it could probably not be answered through the analysis of an object by itself.

The five boxes, provided for the ranking of the different conservation techniques applied, were designed to provide information about different methodologies. The options provided in the instruction booklet were ranges of numbers that described the degree of application of a method. These terms are merely descriptive and are not judgements suggesting that one level is better or worse than another.

The questionnaire was designed with alternative users in mind, and so at the bottom of the form are three tick boxes with the occupational options of: conservator; curator / Archaeologist and Other. In this way, if the survey was continued with other participants, it might be possible to discover if there was a bias in perceptions of different users, by referring to this information. Finally there was a box for "other notes", allowing the entry of bibliographic references, or any other detail thought to be relevant by the user.

The Culture Tree (see p.22)

Before testing with volunteers was undertaken the questionnaire was discussed with my supervisor, Dr Caple, and adjustments made to resolve any ambiguities. The "cultural group" options for the first question were redrafted several times in order to make the selection of an answer more straightforward. The cultural groups list needed to be inclusive, so that an item from any defined social group, past or present, could be fitted into one of the category options. Although the list needed to be inclusive, it also needed to contain a limited number of categories, which complicated the task. The starting point was to define the cultural group of modern conservation practice, since this was to form the point of comparison. Having established this initial category, thought was given to the cultural groups whose material culture was likely to be conserved by the modern group, or "post 1945 conservation laboratory culture" (subsequently referred to as Conservation Laboratory Culture), as it had been dubbed. Inspiration for this was drawn from museum collections, ethnographies, archaeological assemblages and conservation literature. There had to be global coverage, but at the same time it was important that specific social groups could be selected. It was therefore decided to provide continental categories, allowing any object to be placed at least in a broad framework. After this regional and historic options were selected. The categories were arranged so that the modern group was at the top, since this was likely to be referred to with the greatest frequency. Categories

closely associated with the modern group were placed underneath. From this point the continental groups and their subsets were added in an arbitrary order, so that anyone using the questionnaire would have to scan the whole list for the best-fit answer. The categories were then assigned sequential numbers as their code, with "post 1945 conservation laboratory culture" as number one. The difficulty in using the list was that looking through a dense selection of options required concentration and anyone not already familiar with the categories would not necessarily spend sufficient time in selected the most precise option. For this reason the list was completely redesigned as a "culture tree", with broad categories on the left, branching out into more specific categories towards the right. The number codes were also restructured, since with the option of a sequential number, it is not always possible to get a sense of whether or not a user has made a confident choice. With the new coding system three-number codes were developed, where the "generic" left-hand categories were assigned unique, non-consecutive numbers ending in double zero (i.e. hundreds). In this way any errors in recording would be easier to detect. The second set of branches was distinguished as hundreds, with tens of hundredths. These were also not consecutive numbers (with at least two tens between each category). The third set across had numbers ending in one or five (to maintain the numeric gap) and the far right set were coded to end in 2 or 8. This alternative layout was much clearer to read and interpret. If a number was entered onto a form that did not follow the code pattern it would be possible to identify the mistake. Such mistakes would not necessarily find a resolution, however, unless sufficient supporting data was entered into the form.

APPENDIX 2 –
CONTEXTUAL INFORMATION FROM BOX OF ARTEFACTS

This is the information that was provided to supplement existing data and records for the items within "the box of artefacts":

Copper alloy figurine depicting Isis and Horus:

This artefact was excavated in Egypt and depicts the Mother Goddess, Isis with her child, Horus. The figurine, which has been cast in copper alloy, shows Isis wearing a tripartite wig, upon the fringe of which is a nodule that might represent the remains of a cobra affixed to the front of a crown. Although Horus is badly corroded, (as is the whole of the artefact) he seems to retain details of what might have been side locks of hair.

Statuettes of these subjects were extensively produced in the Late Period (c. 1000 BC) until the Ptolemaic Period. There was a concentration in production around 500 BC. (Later figures can often be distinguished by their high proportion of lead). According to the convention this artefact probably would have been seated on a wooden throne. What appear to be traces of tangs in the seat and foot would possibly have held the figure onto the throne.

The figurines were fabricated for visitors to the temples to buy as offerings to the Goddess. The statuettes were produced in different sizes and could be purchased according to a worshipper's means. Isis was deemed to be a powerful Goddess, known as a Goddess of fertility and as a magician with the power of healing.

Copper alloy figurine depicting Wadjet:

This artefact is from the 1971 excavations of the sacred animal necropolis at Saqqara, Egypt. The gilded figurine depicts Wadjet, the cobra Goddess of the South, regarded to be the protector of the Southern lands. This particular example might once have been attached to the crown or headband of a large statuette, or a funerary casket.

The figurine is probably from the latter part of the Late Period (c. 500 BC onwards) up to the beginning of the Ptolemaic Period. The gilding is of interest, because it would not have shown up well against new copper alloy. However, it could be that the figurine was fabricated from "black bronze", which contains a small proportion of gold and can be artificially patinated to produce a black finish. This would provide a vivid distinction between the two metals. Alternatively the artefact might have been patinated to achieve a green colour, since Wadjet means, "she who is green". Elemental analysis might help to clarify the intended finish.

Iron shoe last:

This artefact is an 1890s iron shoe last from Street in Somerset, home of Clark's shoes. Solid iron lasts (as opposed to the wooden counterpart) were introduced with the introduction of the riveting process in 1858. These foot-shaped objects were formers around which shoes and boots could be shaped and finished. For example, machine-sewn work tended to be undertaken on iron lasts. Solid cast iron lasts tended not to be used after 1905.

Group of nails from Inchtuthil:

This artefact is a glass-fronted wooden case containing five nails of different sizes from the legionary fortress of Inchtuthil, Perthshire. The construction of the northern-most Flavian fortress was thought to have begun in 83 AD and was garrisoned by either the Legio XX or II Adiutrix. The fortress was abandoned in 87 AD, perhaps due to a demand for the legion in another part of the Empire. The fortress was not entirely complete at this juncture. Excavation of a large pit in the metalworking workshop revealed around ten tons of nails ranging in size from one inch to over a foot in length, many of which were unused. It has been postulated that only a fraction of the nails would have been required for construction work at the fort itself and that the remainder might have been prepared as supplies for proximate forts. Upon evacuation of the camp the nails were buried and abandoned.

The nails from the assemblage have been placed into a typology that distinguishes the artefacts mainly by length. **Group A** represents the longest nails. The examples in

this case comprise two **Group B** nails (8" and 6¾"); two **Group C** nails (5½" and 3¼") and one **Group E** nail (1? ").

Iron horseshoe:

This 19th century iron horseshoe was discovered on a field walking expedition in Shropshire. Horseshoes are regarded to be a symbol of good luck.

Transcription of the original conservation record for the leather bag:

<table>
<tr><td>CONSERVATION RECORD University of Durham, Dept. of Archaeology</td><td>LAB NO.</td><td></td></tr>
<tr><td rowspan="5">DESCRIPTION
Machine stitched.
White, beige & russet leathers
+ black stained lines across with embossing.
Leather crudely cut.
Some hairs visible.</td><td>SITE AND SITE NO.</td><td>South America</td></tr>
<tr><td>X-RAY NO.</td><td></td></tr>
<tr><td>MATERIAL</td><td>Leather</td></tr>
<tr><td>PREVIOUS TREATMENT</td><td></td></tr>
<tr><td colspan="2" rowspan="3">CONDITION
Dry & brittle</td></tr>
<tr><td>REPORT & RECOMMENDATIONS
Fringes in particular very brittle and contorted. Relaxation required. Insect droppings under fringes.</td></tr>
<tr><td>CONSERVATION TREATMENT (With name of Conservator and date)
1) Brushed to remove droppings.
2) Cleaned with 2% Potassium oleate in white spirit on cotton wool swabs.
3) Tried to relax leather with Bavon APB diluted with white spirit and flattening under pressure. Insufficient relaxation. Removed Bavon with white spirit and dried from acetone. Relaxed in water: soaked in Bavon 520S emulsion 1:1 with water. Dried slowly over several days using manipulation to encourage Bavon entry and slight pressure to flatten fringes.
4) Three small mends with B72.</td></tr>
</table>

The record was transcribed to provide a clearer version of the information to the subjects undertaking the pilot testing for the structured questionnaire. It was presented alongside the original document.

APPENDIX 3 – QUESTIONNAIRES

This appendix contains examples of completed questionnaires – see attached.

Form for recording the conservation details and circumstances

Record number 29

Source material Object ☐ Written record ☐ Published record ✓ Picture ☐

1a) Conserving culture

Number: 121

1b) Culture conserved

Number: 800 — ETHNOGRAPHIC, THOUGH MORE SPECIFICALLY ALEUTIAN ISLANDS, BERING STRAITS, GREENLAND, N. CANADA & ALASKA

2a) Party responsible for the object

Letter: C — PARKAS POSSIBLY DERIVED FROM A NUMBER OF MUSEUMS AND SOURCES. THIS ARTICLE DISCUSSES CONSERVATION PRACTICES FOR SUCH ITEMS.

2b) Why the object has been preserved C [A]

3a) The type of object preserved F [A] — SEAL GUT PARKS FROM AROUND THE ARCTIC CIRCLE (SEE 1b)

3b) The materials that the object comprises Lh | Pp | Fr | Ip | ☐

3c) The deterioration that is evident Pre-conservation: MD | Post-conservation: ☐ | Either Pre or Post-conservation: ☐

4) Who conserved the object

Letters: SB — LYNN MORRISON (AT MUSEUM OF LONDON AT TIME OF CONSERVATION)

5) The balance of techniques used to preserve the object

I 2 | R 2 | C 2 | A 2 | P 2

6) The occupation of the party filling out this form

Conservator ✓ | Curator/Archaeologist ☐ | Other ☐

7) Other notes P. 17-24 THE CONSERVATOR No. 10 1986. "THE CONSERVATION OF SEAL GUT PARKAS" MORRISON, L - 1986 - RD, KEENE, S, UNIC, UK // THIS RAISES QUESTIONS ABOUT THE LIST of CULTURAL GROUPS, SINCE THERE'S NOTHING REALLY TO REPRESENT ARCTIC.

A form for recording the conservation details and circumstances

Record number 31

Source material Object [ ] Written record [ ] Published record [✓] Picture [ ]

1a) Conserving culture

Number 121

1b) Culture conserved

Number 330 RENAISSANCE ITALY, EARLY (16TH)

2a) Party responsible for the object

Letter O THE NATIONAL GALLERY, LONDON

2b) Why the object has been preserved A [C]

3a) The type of object preserved A [ ]

LEONARDO DA VINCI'S CARTOON OF THE VIRGIN & CHILD WITH ST ANNE & ST JOHN THE BAPTIST (= 1507-8) PREPARED WITH IRON OXIDE, CALCIUM SULPHATE & CARBON BLACK ON 8 LARGE SHEETS OF OVERLAPPING PAPER. DETAIL IN CHARCOAL & CALCIUM CARBONATE

3b) The materials that the object comprises Pa Tx Pp Ip Wo

3c) The deterioration that is evident Pre-conservation [ND] Post-conservation [ND] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB ERIC HARDING WAS THE CONSERVATOR WHO UNDERTOOK THE WORK ALTHOUGH THE WAY TO PROCEED HAD BEEN DISCUSSED BY A No. OF CONSERVATORS FROM THE BRITISH MUSEUM, THE V&A, THE TATE GALLERY AND THE ROYAL LIBRARY AT WINDSOR CASTLE

5) The balance of techniques used to preserve the object

I 2 R 2 C X1 A 2 P 2

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes p. 28 - 41 THE ACT OF THE CONSERVATOR, HARDING E & ODDY A, "LEONARDO DA VINCI'S CARTOON THE VIRGIN & CHILD WITH ST ANNE & ST JOHN THE BAPTIST" 1992, ED. A. ODDY, BRITISH MUSEUM PRESS, LONDON, UK // CAN '62 CONSERVATION BE FOUND?

Form for recording the conservation details and circumstances

Record number 35

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number: 121 — CONS LAB - CONS BY CONS PATRICIA JACKSON

1b) Culture conserved

Number: 180 — MID (17TH) SPANISH CULTURE (BUT WAS IT MADE FOR EXPORT?)

2a) Party responsible for the object

Letter: O — THIS IS SPECULATED, BUT OWNER IS NOT NAMED IN ARTICLE.

2b) Why the object has been preserved A [F]

3a) The type of object preserved F [A]

A SPANISH EBONY & TORTOISESHELL CABINET, WITH REVERSE PAINTED GLASS PANELS - MID (17TH)

3b) The materials that the object comprises Wo Gl Bo Ip Pp

3c) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters: SB — PATRICIA JACKSON, CONS OF "THE CONSERVATION STUDIO", LONDON C. 1985

5) The balance of techniques used to preserve the object

I [1] R [2] C [1] A [1] P [1]

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No. 9 1985 - DAVISON, S. & JACKSON, P. 1985 - Ed. S. KEENE, UKIC, LONDON, UK P. 3-13

Form for recording the conservation details and circumstances

Record number 37

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number (2) CONS LAB - CONS BY MISS LOUISE BACON c. 1982

1b) Culture conserved

Number 965 MAORI CULTURE c. 1860

2a) Party responsible for the object

Letter O SAFFRON WALDON MUSEUM, ESSEX

2b) Why the object has been preserved C [A]

3a) The type of object preserved C [A] A MAORI MODEL CANOE IN THE STYLE OF A FISHING CANOE DECORATED WITH CARVING, SHELLS, STONES & RED AND BLACK PAINT c. 1860. IN STYLE OF NGAT KAHU TRIBE, DOUBTLESS BAY

3b) The materials that the object comprises Wo Bo St Ip Pp

3c) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB CONSERVED BY LOUISE BACON OF SAFFRON WALDON MUSEUM, ESSEX. WORK c. 1982

5) The balance of techniques used to preserve the object

I 2 R 2 C 1 A 1 P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No 39 1985 - BACON, L. "THE EXAMINATION, ANALYSIS & CONSERVATION OF A MAORI MODEL CANOE" - 1985 - Ed S. KEENE. UKIC, LONDON, UK pp 26 - 32.

Form for recording the conservation details and circumstances

Record number 39

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 | LAB CULTURE - CONS. BY CON IN 1986

1b) Culture conserved

Number 110 | PAINTED BY FRANZ KLINE 1960-1

2a) Party responsible for the object

Letter O? | PROBABLY OWNED OUTRIGHT, BUT MIGHT BE ON LOAN AS PART OF EXHIBITION. NOT ENOUGH INFO TO SAY FOR CERTAIN!

2b) Why the object has been preserved [A] [ ]

3a) The type of object preserved [A] [ ] HERYON IS A PAINTING - OIL ON HEAVY FLAX CANVOUS WITH A CONTINUOUS GROUND LAYER - BY FRANZ KLINE

3b) The materials that the object comprises [Tx] [Ip] [Pp] [Wo] [ ]

3c) The deterioration that is evident Pre-conservation [SD ✓] Post-conservation [ ] Either Pre or Post-conservation [ ]

4) Who conserved the object

Letters SB | CONSERVATOR - NICOLE RIDER OF AMSEE Studio, LONDON - PROBABLY WORKING IN 1986

5) The balance of techniques used to preserve the object

I [2] R [2] C [0] A [1] P [1]

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No. 10 1986; RIDER, N. - 1986 - Ed. S. KEENE, UKIC, LONDON, UK PP 31-36

Form for recording the conservation details and circumstances

Record number 41

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 — LAB CONS - CON BY THEODORE STURGE

1b) Culture conserved

Number 395 — (2ND - 3RD) ROMANO - BRITISH

2a) Party responsible for the object

Letter O — PROBABLY OWNED BY A MUSEUM IN THE LEICESTERSHIRE MUSEUMS SERVICE GROUP

2b) Why the object has been preserved A [E]

3a) The type of object preserved F [A]

ROMAN WALLPLASTER FROM LEICESTER - NORFOLK STREET ROMAN VILLA c. LATE (2ND) - EARLY (3RD) (AD)

3b) The materials that the object comprises St | lp | | | |

3c) The deterioration that is evident Pre-conservation [ED✓] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONS BY THEO STURGE c. 1982 OF LEICESTERSHIRE MUSEUMS & ART GALLERIES AND RECORD SERVICE

5) The balance of techniques used to preserve the object

I 2 | R 2 | C 1 | A 1 | P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No. 10 1986 - STURGE, T - THE REASSEMBLY AND DISPLAY OF FALLEN ROMAN WALLPLASTER FROM LEICESTER - 1986 - Ed. S. KEENE, UKIC, LONDON, UK PP 37-43

Form for recording the conservation details and circumstances

cord number: 43

urce material: Object [ ] Written record [ ] Published record [✓] Picture [✓]

1) Conserving culture

Number	
121	CONS BY CAD CONS - PATRICIA JACKSON

1b) Culture conserved

Number	
140	18th - 20th CULTURE

l) Party responsible for the object

Letter	
O	POSSIBLY PART OF THE B.H.S COLLECTIONS

) Why the object has been preserved: C [ ]

l) The type of object preserved: F [ ]

AN ENGRAVED WINE GLASS c 19th

) The materials that the object comprises: GL [ ] [ ] [ ] [ ]

) The deterioration that is evident: Pre-conservation [ED] Post-conservation [SD] (PREVIOUS CODE) Either Pre or Post - conservation [ ]

Who conserved the object

Letters	
SB	CONS BY PATRICIA JACKSON OF THE CONS & TECHNICAL SERVICES DEPT., CERAMICS & GLASS) B.M., LONDON c. 1982

The balance of techniques used to preserve the object

1	R	2	C	1	A	2	P	1

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes: THE CONSERVATOR No. 6 - 1982 - P. JACKSON - A DOWELLING TECHNIQUE FOR GLASS RESTORATION - 1982 - Ed. S. HACKNEY, UKIC, LONDON, UK pp 35-36

Form for recording the conservation details and circumstances

cord number 45

rce material Object [ ] Written record [ ] Published record [✓] Picture [✓]

) Conserving culture

Number 121 CONS BY CAG CONS - BARRY JOHNSON & PAULINE BEARPARK

1b) Culture conserved

Number 350 MEDIEVEL RELIGIOUS CULTURE

or 362

) Party responsible for the object

Letter O NORTON PRIORY MUSEUM

) Why the object has been preserved [C] [E]

) The type of object preserved [F] [ ] MEDIEVAL FLOOR TILES AT NORTON PRIORY c. 1134

) The materials that the object comprises [Ce] [ ] [ ] [ ] [ ]

) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

Who conserved the object

Letters SB CONS BY BARRY JOHNSON & PAULINE BEARPARK OF NORTON PRIORY MUSEUM TRUST, RUNCORN, CHESHIRE c. 1982

The balance of techniques used to preserve the object

I [1] R [2] C [2] A [2] P [1]

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes THE CONSERVATOR No. 6 - 1982 - JOHNSON, B & BEARPARK, P. - THE CONSERVATION OF MEDIEVAL FLOOR TILES AT NORTON PRIORY - 1982 - Ed. S. HACKNEY, OKIC, LONDON, UK PP 45-8

Form for recording the conservation details and circumstances

cord number 47

ırce material Object ☐ Written record ☐ Published record ✓ Picture ✓

) Conserving culture

Number 121 CONSERVED BY ZENIE TINKER

1b) Culture conserved

Number 110 LATE (19TH - 20TH CULTURE

) Party responsible for the object

Letter O OWNED BY THE V & A

) Why the object has been preserved E [C]

) The type of object preserved F [C] AN 1890s WOMAN'S RUBBERISED WOOL RAINCOAT, MADE BY "CURRIE, TAOMSON & Co. OF EDINBURGH & LONDON" - KNOWN AS "THE IMPENETRABLE LADIES WATERPROOF"

) The materials that the object comprises Tx Pp Fe ☐ ☐

) The deterioration that is evident Pre-conservation MD Post-conservation MD OCCURRED DURING PREVIOUS STORAGE SYSTEM Either Pre or Post - conservation ☐

Who conserved the object

Letters SB CONS BY ZENIE TINKER OF V&A (TEXTILE) CONS DEPT WORK c. 1999

The balance of techniques used to preserve the object

2 R 2 C 0 A 1 P 2

The occupation of the party filling out this form

nservator ✓ Curator/Archaeologist ☐ Other ☐

Other notes THE CONSERVATOR No. 24 - 2000 - NUTTGENS, F & TINKER, Z - THE CONSERVATION OF EDWARDIAN TEXTILES: TWO CASE HISTORIES - 2000 - Ed. J. CRONYN, UKIC, LONDON, UK PP 24 - 38

Form for recording the conservation details and circumstances

ecord number: 49

ource material: Object [ ] Written record [ ] Published record [✓] Picture [✓]

a) Conserving culture

Number	
121	CONSERVED BY TRACEY SWEEK, ANDREW MIDDLETON, CATHERINE JOHNS & KEN UPRICHARD ET AL

1b) Culture conserved

Number	
395	ROMANO-BRITISH CULTURE e.

a) Party responsible for the object

Letter	
O	OWNED BY THE BM

b) Why the object has been preserved: C [A]

a) The type of object preserved: F [A]

MOSAIC (FLOOR) OF VENUS FROM HEMSWORTH ROMAN VILLA, DORSET, DISCOVERED IN 1831 - ROMANO-BRITISH MOSAIC

b) The materials that the object comprises: St | Ce | Ip | | |

c) The deterioration that is evident: Pre-conservation [ED] Post-conservation [ ] Either Pre or Post-conservation [ ]

) Who conserved the object

Letters	
SB	CONSERVED BY KEN UPRICHARD OF CONS DEPT AT BRITISH MUSEUM, ALONG WITH TRACEY SWEEK (FORMERLY BM) OF HOLDEN CONSERVATION, LONDON, WITH HELP FROM ANDREW MIDDLETON, DEPT OF SCIENTIFIC RESEARCH, BM & CATHERINE JOHNS, ASSISTANT KEEPER IN DEPT OF PREHISTORIC & R-B ANTIQUITIES, BM + OTHER CONS & STAFF

) The balance of techniques used to preserve the object

2	R	2	C	1	A	1	P	1

) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

) Other notes: THE CONSERVATOR - No. 24 - 2000 - SWEEK, T., MIDDLETON, A., JOHNS, C. & UPRICHARD, K. - THE MATERIALS, CONSERVATION & REMOUNTING OF THE HEMSWORTH VENUS MOSAIC - 2000 - Ed. J. C. CONYN, UKIC, LONDON, UK PP. 61 - 68

Form for recording the conservation details and circumstances

ecord number: 51

ource material: Object [ ] Written record [ ] Published record [✓] Picture [✓]

a) Conserving culture

Number	
121	LAB CONS - BARBARA WILLS

1b) Culture conserved

Number	
390	ROMAN (EVEN THOUGH ROMANO-EGYPTIAN OF 3RD-4TH AD

a) Party responsible for the object

Letter	
O	OWNED BY BRITISH MUSEUM

b) Why the object has been preserved: C [E]

a) The type of object preserved: F [C]

A ROMANO-EGYPTIAN ("LEATHER") CUIRASS & HELMET MADE FROM CROCODILE SKIN c. 3RD-4TH AD

b) The materials that the object comprises: Lh | Tx | | | |

c) The deterioration that is evident: Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

) Who conserved the object

Letters	
SB	CONS BY BARBARA WILLS OF DEPT OF CONS, ORGANIC ARTEFACTS SECTION, B.M., LONDON. WITH HELP FROM DEAN SULLY c. ~~2000~~ LATE 1980s (?)

) The balance of techniques used to preserve the object

R	C	A	P
1	2	1	2	1

) The occupation of the party filling out this form

onservator [✓] Curator/Archaeologist [ ] Other [ ]

)

Other notes	
	THE CONSERVATOR No. 24 - 2000 - WILLS, B. - A REVIEW OF THE CONSERVATION TREATMENTS OF A ROMANO-EGYPTIAN CUIRASS & HELMET MADE FROM CROCODILE SKIN - 2000 - Ed. J. CRONYN, UKIC, LONDON, UK, PP 80-88

Form for recording the conservation details and circumstances

Record number 53

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 — LAB CONS - CONS BY PETER VAN GEERSDAELE & LESLEY GOLDSWORTHY

1b) Culture conserved

Number (355) (HIGH MEDIEVAL ENGLISH CULTURE)
362 ↓ RELIGIOUS CULTURE

2a) Party responsible for the object

Letter O — THE B.M. RECEIVED THE FRAGS IN 1814, WHEN PRESENTED THEM BY THE SOCIETY OF ANTIQUARIES, LONDON

2b) Why the object has been preserved A [E]

3a) The type of object preserved C [A] — WALL PAINTINGS OF ST. STEPHEN'S CHAPEL, WESTMINSTER c 1350-1363

3b) The materials that the object comprises St | lp | Pb | Pp | [ ]

3c) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONSERVED BY VAN GEERSDAELE & GOLDSWORTHY OF BRITISH MUSEUM C. 1973

5) The balance of techniques used to preserve the object

I 2 | R 2 | C 1 | A 2 | P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No. 2 1978 - VAN GEERSDAELE, P.C. & GOLDSWORTHY, L.J. - THE RESTORATION OF WALL PAINTING FRAGMENTS FROM ST. STEPHEN'S CHAPEL, WESTMINSTER - 1982 - Ed. SANDRA DAVIDSON, UKIC, LONDON, UK PP. 9 - 12

Form for recording the conservation details and circumstances

Record number 55

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 — CONS BY LAB CONS JOHN LARSON

1b) Culture conserved

Number 362? — (18TH ENGLISH RELIGIOUS CULTURE?

2a) Party responsible for the object

Letter O — OWNED BY ALL SAINTS CHURCH, ISLEWORTH

2b) Why the object has been preserved C [A]

3a) The type of object preserved

C [A] — SCULPTURE (MARBLE) OF SIR ORLANDO GEE, BY FRANCIS BIRD (1705)

3b) The materials that the object comprises St [ ] [ ] [ ] [ ]

3c) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONS BY CONS JOHN LARSON, SENIOR CONS OFFICER AT THE V & A, LONDON C. LATE 1970s

5) The balance of techniques used to preserve the object

I [1] R [2] C [2] A [2] P [1]

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR VOL 2 1978 - LARSON, J. - THE CONSERVATION OF MARBLE MONUMENTS IN CHURCHES, 1978, Ed. S. DAVIDSON, VKIC, LONDON, UK P.P. 20-25

Form for recording the conservation details and circumstances

Record number 57

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 — CAS CONS - BY KSYNIA HARKO

1b) Culture conserved

Number 330 — (16TH BRITISH RENAISSANCE CULTURE ?

2a) Party responsible for the object

Letter O — OWNED, PRESUMABLY BY OWNER OF HARDWICK HALL

2b) Why the object has been preserved A [C]

3a) The type of object preserved F [A]

ULYSSES TAPESTRY FROM HARDWICK HALL - (16TH
WOOL & SILK WITH OIL-PAINTED INSCRIPTION

3b) The materials that the object comprises Tx | Ip | | | |

3c) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONSERVED BY KSYNIA HARKO, CONS OFFICER AT DEPT OF CONS (TEXTILES), V & A, LONDON. AIDED BY S. HURRELL & S. LANDI (ALSO V & A)
WORK C. 1973

5) The balance of techniques used to preserve the object

I 1 | R 2 | C 1 | A 2 | P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR VOL 2. 1978 - EXPERIMENTS IN SUPPORTING TAPESTRY USING THE ADHESIVE METHOD - HARKO, K - 1978 - Eds. DAVISON, UKIC, LONDON, UK PP. 26-29

Form for recording the conservation details and circumstances

Record number 59

Source material Object [ ] Written record [ ] Published record [✓] Picture [ ]

1a) Conserving culture

Number 121 — LAB CONS CONS - GEORGE HONGER

1b) Culture conserved

Number 191 — (19th ? SOCIAL HISTORY CULTURE,

2a) Party responsible for the object

Letter O — OWNED BY MUSEUM OF EAST ANGLIAN LIFE

2b) Why the object has been preserved E [f]

3a) The type of object preserved F [ ] — TUNBULL (CART) (REGISTRATION No. A 1694)

3b) The materials that the object comprises Wo | Fe | Ip | | |

3c) The deterioration that is evident Pre-conservation ED | Post-conservation [ ] | Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONS. BY GEORGE HONGER, CONSERVATOR AT MUSEUM OF EAST ANGLIAN LIFE, STOWMARKET, SUFFOLK, C. LATE 1970s

5) The balance of techniques used to preserve the object

I 1 | R 2 | C 2 | A 2 | P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR VOL 2 1978 - HONGER G. - CONSERVATION OF WOODEN VEHICLES 1998 - Ed. S. DAVIDSON, UKIC, LONDON, UK pp. 32-34

Form for recording the conservation details and circumstances

Record number 61

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number (21) LAB CONS - CONS BY R.W. & E. BAKER

1b) Culture conserved

Number 362 (13TH) RELIGIOUS CULTURE

2a) Party responsible for the object

Letter O OWNED BY WINCHESTER CATHEDRAL

2b) Why the object has been preserved C [A]

3a) The type of object preserved C [A] WALLPAINTINGS IN THE CHAPEL OF THE GUARDIAN ANGELS, WINCHESTER CATHEDRAL C. (13TH)

3b) The materials that the object comprises St | lp | Au | | |

3c) The deterioration that is evident Pre-conservation MD | Post-conservation [ ] | Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB CONSERVED BY PROFESSOR R.W & MRS E. BAKER OF "HILLSIDE", SOUTH NEWINGTON, NR. BANBURY, OXFORDSHIRE C. 1957

5) The balance of techniques used to preserve the object

I 1 | R 2 | C 2 | A 1 | P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR VOLUME 1 - 1977 - R.W & E. BAKER - AN ACCOUNT OF THE PAINTED VAULT IN THE CHAPEL OF THE GUARDIAN ANGELS, WINCHESTER CATHEDRAL, 1977 - Ed. S. DAVISON, UKIC, LONDON, UK. PP. 17-21

Form for recording the conservation details and circumstances

cord number: 63

ırce material: Object [ ] Written record [ ] Published record [✓] Picture [✓]

) Conserving culture

Number: 121 — LAB CONS - CONS BY JULIAN ROGERS ET ALS

1b) Culture conserved

Number: 161? — (19TH "COUNTRY HOUSE" CULTURE=

) Party responsible for the object

Letter: O — THE MUSIC BOOK IS WITHIN THE BRIGHTON PAVILION

) Why the object has been preserved: C [A]

) The type of object preserved: F [A] — MUSIC BOOK OF BRIGHTON PAVILION C. 1822, BURNED IN FIRE OF NOV 1975

) The materials that the object comprises: Wo | St | GL | Tx | Pa

) The deterioration that is evident — Pre-conservation: ED; Post-conservation: [ ]; Either Pre or Post - conservation: [ ]

Who conserved the object

Letters: SR — CONS BY A TEAM OF CONS INCLUDING JULIAN ROGERS, A PICTURE CONS, A DECORATIVE ARTIST, A CARVER/GILDER/FURNITURE SPECIALIST, SCIENTIST, TRAINEE & +E S TECHNICIANS, + CABINET MAKER & WOODCARVER C. LATE 70S - WORK COMPLETED IN '83?

The balance of techniques used to preserve the object

2 R 2 C 2 A 2 P 1

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes: THE CONSERVATOR No. 4 - 1980 - ROGERS, S - THE APPROACH TO RESTORATION OF THE MUSIC BOOK, BRIGHTON PAVILION, FOLLOWING ACTION IN 1975 — 1980 - Ed. S. DAVISON - UKIC, LONDON, UK PP 5 — 11

Form for recording the conservation details and circumstances

ecord number: 65

urce material: Object [ ] Written record [ ] Published record [/] Picture [✓]

a) Conserving culture

Number	
121	CAG CONS - ROBERT SMITH ET AL

1b) Culture conserved

Number	
366	HIGH MEDIVEL SECULAR CULTURE - c. 1480

a) Party responsible for the object

Letter	
O	THE NATIONAL MUSEUM OF ARMS & ARMOUR, TOWER OF LONDON,

) Why the object has been preserved: E [ ]

a) The type of object preserved: F [ ] SET OF BRIGANDINE ARMOUR (PLATE ARMOUR FOR THE BODY) C. 1480

) The materials that the object comprises: Fe | Tx | Lh | Sn | Pb

:) The deterioration that is evident: Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

Who conserved the object

Letters	
SB	CONS BY ROBERT SMITH OF THE ARMOURIES, TOWER OF LONDON (ALONG WITH ELIZABETH HOPPER WHO CLEANED / CONSERVED THE FABRIC, PETER JONES: METALLURGICAL ANALYSIS & J. DURRAN, V&A; FABRIC I.D.) WORK C. 1980

The balance of techniques used to preserve the object

2 R 2 C 2 A 2 P 1(2)

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes THE CONSERVATOR No. 8 - 1984 - SMITH, R - THE CONSERVATION OF A BRIGANDINE - 1984 - Ed. S. HACKNEY, UKIC, LONDON, UK PP. 3-7

Form for recording the conservation details and circumstances

ecord number 67

urce material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1) Conserving culture

Number 121 LAB CONS

1b) Culture conserved

Number 330 (15TH) ITALIAN RENAISSANCE

1) Party responsible for the object

Letter O OWNED BY THE BRITISH MUSEUM

1) Why the object has been preserved A [C]

1) The type of object preserved A [ ] DRAWING OF 'MADONNA & CHILD WITH CAT' EXECUTED BY LEONARDO DA VINCI GALL INK, ON WHITE LAID PAPER C. 1478

1) The materials that the object comprises Pa | Ip | | | |

1) The deterioration that is evident Pre-conservation MD | Post-conservation [ ] | Either Pre or Post - conservation [ ]

1 Who conserved the object

Letters SB CONSERVED BY VICTORIA ASTLEY OF DEPT OF PRINTS & DRAWINGS (CONS), B.M. /LONDON C. 1980

1 The balance of techniques used to preserve the object

I [1] R [2] C [1] A [2] P [2]

1 The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

1 Other notes THE CONSERVATOR No. 8 - 1984 - ASTLEY, V. - CONSERVATION & RESTORATION OF "MADONNA & CHILD WITH CAT" A DRAWING BY LEONARDO DA VINCI - 1984 - LS HACKNEY, UK I C, LONDON, UK, PP. 22-25

Form for recording the conservation details and circumstances

cord number: 69

urce material: Object [ ] Written record [ ] Published record [✓] Picture [✓]

1) Conserving culture

Number: 121 — LAB CONS - AMBROSE SCOTT-MONCRIEFF

1b) Culture conserved

Number: 191 — LATE (20TH) SOCIAL HISTORY CULTURE?

) Party responsible for the object

Letter: O — OWNED BY SOUTHAMPTON ART GALLERY

) Why the object has been preserved: A [ ]

.) The type of object preserved: A [ ] — FOLDING PAINTING BY JOHN WALKER - "LABYRINTH IV" (No. 3/1980) EXECUTED IN (OIL) IMPASTO ON CANVAS c. 1980

) The materials that the object comprises: Tx | Ip | Wo | | |

) The deterioration that is evident: Pre-conservation [§D] Post-conservation [ ] Either Pre or Post - conservation [ ]

Who conserved the object

Letters: SB — CONS BY A. SCOTT-MONCRIEFF, SOUTHAMPTON ART GALLERY c. 1980s (EARLY)

The balance of techniques used to preserve the object

I | R 2 | C 0 | A 1 | P 1

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes: THE CONSERVATOR No. 8 - 1984 - SCOTT-MONCRIEFF, A - THE MODIFICATION OF A FOLDING PICTURE, 1984, Ed. S. HACKNEY, URIC, LONDON, UK PP 35-40

Form for recording the conservation details and circumstances

ecord number 71

urce material Object [ ] Written record [✓] Published record [✓] Picture [✓]

1) Conserving culture

Number 121 LAB CONS BY P. FISHER (?)

1b) Culture conserved

Number 430 (5TH BC GREEK

1) Party responsible for the object

Letter O OWNED BY THE BRITISH MUSEUM

) Why the object has been preserved A [C]

) The type of object preserved F [A] ATHENIAN CERAMIC JUG (WHITE GROUND LEKYTHOS) c. (5TH BC

) The materials that the object comprises Ce [ ] [ ] [ ] [ ]

) The deterioration that is evident Pre-conservation [ED] Post-conservation [ ] Either Pre or Post - conservation [ ]

Who conserved the object

Letters SB CONS BY P. FISHER(?) OF BRITISH MUSEUM C. 1979

The balance of techniques used to preserve the object

1 R 1 C 1 A 2 P 1

The occupation of the party filling out this form

nservator [✓] Curator/Archaeologist [ ] Other [ ]

Other notes THE CONSERVATOR No. 7 - 1983 - BRADLEY S., "CONSERVATION RECORDING IN THE BRITISH MUSEUM" - 1983 - Ed. S. HACKNEY, UKIC, LONDON, UK PP. 9 - 12 TAKEN FROM COPY OF CON REC. PUBLISHED IN ARTICLE

Form for recording the conservation details and circumstances

Record number 73

Source material Object [ ] Written record [ ] Published record [✓] Picture [✓]

1a) Conserving culture

Number 121 — LAB CODS - SEE BELOW

1b) Culture conserved

Number 110 — LATE (19TH - 20TH CULTURE

2a) Party responsible for the object

Letter O — PROBABLY OWNED BY THE UNIVERSITY OF NEWCASTLE

2b) Why the object has been preserved A [E]

3a) The type of object preserved A [ ]

COLLECTION OF 6 PAINTINGS BY WILLIAM HENRY CHARLTON C. LATE (19TH, 3 OF WHICH WERE SHOWING A WHITE BLOOM.

3b) The materials that the object comprises ? Tx | Ip | | | |

3c) The deterioration that is evident Pre-conservation 3D Post-conservation [ ] Either Pre or Post - conservation [ ]

4) Who conserved the object

Letters SB — CONSERVED BY BRIAN SINGER, JIM DEVENPORT & DAVID WISE

UNIVERSITY OF NORTHUMBRIA. WISE = PAINTINGS CONSERVATOR, AUKLAND CITY ART GALLERY, NEW ZEALAND C. 1995

5) The balance of techniques used to preserve the object

I 2 R 2 C 1 A 2 P 1

6) The occupation of the party filling out this form

Conservator [✓] Curator/Archaeologist [ ] Other [ ]

7) Other notes THE CONSERVATOR No 19 - 1995 - SINGER, B, DEVENPORT J & WISE, D - EXAMINATION OF A BLOOMING PROBLEM IN A COLLECTION OF UNVARNISHED OIL PAINTINGS - 1995 - Ed. C. VILLERS, UKIC, LONDON, UK pp 3-9

APPENDIX 4 – DATABASE

This appendix contains a sample of the information from the Excel spreadsheet containing the questionnaire responses – see attached.

Spreadsheet containing the information from the forms:										Balance of techniques					
Record no.	**Source material**	**Conserving culture**	**Culture conserved**	**Party responsible for obj**	**Why obj preserved**	**Type obj preserved**	**Materials**	**Deterioration**	**Who conserved obj**	**I**	**R**	**C**	**A**	**P**	**What obj is**
1	pw	121	650,712	o	ec	fc	Lh,Cu,Fe,Fr	sdpre/sdp	sb	2	2	1	1	2	indian/persian shield
2	pw	121	742	o	ca	fa	Wo,Lh.Bo,Ag,Fe	sdpre	sb	1	2	2	1	1	Chinese? cutlery set comprising wooden tube covered in shagreen & containing ivory chopsticks & rod, 2 Ag forks & bowls & spoon + Fe file
3	pw	121	712	o	ca	fc	Lh,Cu,Fe,Fr	mdpre	sb	1	2	1	1	2	buffalo hide shield from India. 1 of CuA bosses missing
4	pw	121	191	o	ec	f	Lh,Tx	edpre	sb	1	2	1	1	2	pair leather overshoes from Seaton Delaval colliery, which opened 1838, closed 1960
5	pw	121	366	c	e	f	Lh	edpre	sb	1	2	2	1	1	shoe frags from Woodhall Moated Manor exc 1996
6	pw	121	350	c	e	f	Lh	edpre	sb	1	2	2	1	1	frags waterlogged leather from Woodhall exc 1994
7	pw	121	742	o	ae	fa	Tx,Lq,Bo,Cu	mdpre	sb	2	2	2	1	1	Chinese? Lacquer dish
8	pw	121	628	o	ec	c	Bo	sdpre	sb	1	2	2	1	1	ivory Egyptian djed pillar amulet

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
9	pw	121	350	c	ea	f	Bo,Fe	edpre	sb	2	2	1	1	1	ivory knife handle with Fe tang/blade embedded
10	pw	121	350	o	e	f	Bo,Fe	edpre	sb	1	2	1	1	1	ivory knife handle with Fe tang embedded, Woodhall
11	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	1	1	1	ivory? Tuning peg from Woodhall exc 1997
12	pw	121	191	o	ec	f	Ba,Lq	mdpre	sb	1	2	2	1	2	lidded basket dated 1800-1805
13	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	1	1	1	fish tooth, thought to be artefactual before cleaning, Woodhall exc 1997
14	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	1	1	1	Bone/horn/antler button Woodhall exc 1997
15	pw	121	350	o	e	f	Bo	mdpre	sb	1	2	2	1	1	shell button Woodhall exc 1997
16	pw	121	350	o	e	f	Bo	edpre	sb	1	2	1	1	1	bone comb Woodhall exc 1997
17	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	2	1	1	carved bone artefact Woodhall exc 1997
18	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	2	1	1	decorated bone button Woodhall exc 1997

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
19	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	1	1	1	piece of bone with holes Woodhall exc 1997
20	pw	121	350	o	e	f	Bo	edpre	sb	1	2	1	1	1	part of bone knife handle Woodhall exc 1997
21	pw	121	350	o	e	f	Bo	sdpre	sb	1	2	1	1	1	bone tuning piece Woodhall exc 1997
22	pw	121	350	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	part of bone-handle knife Woodhall exc 1997
23	pw	121	180	o	e	f	Bo	edpre	sb	1	2	2	1	1	bone comb from Keekle High-Wrea farmhouse (17thC) exc 1987
24	pw	121	350	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	bone-handled knife Woodhall exc 1992
25	pw	121	350	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	bone-handled knife Woodhall exc 1992
26	pw	121	350	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	bone-handled knife Woodhall exc 1991
27	pw	121	375	o	e	f	Bo	edpre	sb	1	2	2	1	1	bone handle from Jarrow, possibly Bede's World
28	pr	121	390	o	ac	a	Gl,Pp	edpre	sb	1	2	2	2	2	The Portland vase
29	pr	121	800	c	ca	fa	Lh,Pp,Fr,Ip	mdpre	sb	2	2	2	2	2	seal gut parka from arctic circle

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
30	pr	121	330	o	ac	a	Pa,Tx,lp,Pp	edpre	sb	1	2	2	1	2	cartoon of Henry VII & VIII on hand-made paper, by Hans Holbein c1536
31	pr	121	330	o	ac	a	Pa,Tx,lp,Pp,Wo	edpre/ndpost	sb	2	2	1	2	2	cartoon of Virgin & Child, with St Anne & St John the Baptist, by Leonardo Da Vinci c1507-8
32	ppr	121	191	o	ca	fa	Gl,Wo,Pp,Ag	edpre	sb	1	2	1	1	1	mirror etched with Sackville coat of arms, c1691
33	ppr	121	191	o	af	fa	Gl,Wo,Pa,Pp,Ag	edpre	sb	1	2	1	1	1	N. Italian C17th mirror, etched with decorative sections attached around main mirror
34	ppr	121	140	o	ac	ac	Gl,lp,Pp	sdpre	sb	1	2	1	2	1	hinter glasmalerei (reverse painted glass) depiction of sailing ship, Elizabeth of Sunderland, c1835
35	ppr	121	180	o	af	fa	Wo,Gl,Bo,lp,Pp	edpre	sb	1	2	1	1	1	Spanish ebony & tortoise-shell cabinet, with reverse-painted glass panels, mid C17th

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
36	ppr	121	180	o	a	a	Tx,?,Pa	sdpre	sb	1	2	2	1	2	C17th embroidery on linen, with tent stitch in coloured silk thread
37	ppr	121	965	o	ca	ca	Wo,Bo,St,Ip,Pp	edpre	sb	2	2	1	1	1	Maori model canoe decorated withcarving, shells, stones & paint (red/black) c1860
38	ppr	121	366	o	cf	cf	Tx,Fr,Wo	edpre	sb	1	2	2	2	1	cap of maintenance from York, work by Mayor's esquire of the sword, c1580
39	ppr	121	110	o?	a	a	Tx,Ip,Pp,Wo	sdpre	sb	2	2	0	1	1	"Meryon" oil painting on flax canvous, by Franz Kline
40	pr	121	110	o	a	a	Tx,Pp,Wo?	sdpre	sb	2	2	0	1	1	"Deep Black Purple" acrylic painting on Duck canvas, by Robert Law c1970s
41	ppr	121	395	o	ae	fa	St,Ip	edpre	sb	2	2	1	1	1	Roman wallplaster from Norfolk Street Roman villa, Leicester, cC2nd-3rd AD

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
42	ppr	121	350	c	ce	c	St	edpre	sb	1	2	1	0	0	pillar of Eliseg C9th stone pillar
43	ppr	121	140	o	c	f	Gl	edpre/sdpre	sb	1	2	1	2	1	engraved wine glass, cC19th
44	ppr	121	161	o	ca	a	Ce,Wo,Fe,Cu,Sn	edpre	sb	2	2	2	2	1	porcelain centrepiece of the Sevres Egyptian service, c1810
45	ppr	121	350,362	o	ce	f	Ce	edpre	sb	1	2	2	2	1	medieval floor tiles at Norton Priory c1134
46	ppr	121	180	o	ca	fc	Tx,Wo,Fe	mdpre	sb	2	2	1	2	1	late C17th state bed from Melville House
47	ppr	121	110	o	ec	fc	Tx,Pp,Fe	mdpre/mdpost	sb	2	2	0	1	2	1890s woman's rubberised wool raincoat, by Currie, Thomsom & Co of Edinburgh & London - impenetrable ladies waterproof
48	ppr	121	110	o	ec	f	Tx,Pp,Fe	edpre	sb	2	2	1	1	1	1968 rubberised viscose flight bag from "the World Airways" USA
49	ppr	121	395	o	ca	fa	St,Ce,lp	edpre	sb	2	2	1	1	1	Mosaic floor of Venus from Hemsworth Roman villa, Dorset
50	ppr	121	140	o	e	fc	Lh,lp	sdpre	sb	2	2	2	2	1	C18th parchment document 1799

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
51	ppr	121	390	o	ce	fc	Lh,Tx	edpre	sb	1	2	1	2	1	Romano-Egyptian leather cuirass & helmet cC3-4th AD
52	ppr	121	180	o	ca	ac	Tx,Pa,Pp	edpre	sb	2	2	2	2	1	embroidered picture of "the expulsion of Haga & Ishmael" c1660
53	ppr	121	362	o	ae	ca	St,Ip,Pb,Pp	edpre	sb	2	2	1	2	1	wall painting of St Stwphen's Chapel, Westminster 1350-65
54	ppr	121	395	o	e	f	Fe,Wo,Lh	edpre	sb	2	2	2	1	1	Roman chest from Roman villa at Bradwell, Milton Keynes, c C1-C2 AD
55	ppr	121	362	o	ca	ca	St	edpre	sb	1	2	2	2	1	marble sculpture of Sir Orlando Gee, by Francis Bird 1705
56	pr	121	362	o	ca	ca	St	edpre	sb	1	2	2	2	1	marble sculpture of Anne Tolson, by William Halfpenny c1750
57	ppr	121	330	o	ac	fa	Tx,Ip	edpre	sb	1	2	1	2	1	Ulysees tapestry from Hardwick Hall, wool & silk with painted inscription C16th
58	pr	121	191	o	ce	fc	Wo,Fe	edpre	sb	1	2	1	1	1	Gypsy caravan wheel on c'van No, A3298

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
59	pr	121	191	o	ef	f	Wo,Fe,lp	edpre	sb	1	2	2	2	1	tumbril registration No. A1694
60	pr	121	191	o	ef	f	Wo,Fe,lp	edpre	sb	1	2	2	2	1	tumbril registration No. A2267
61	ppr	121	362	o	ca	ca	St,lp,Au	mdpre	sb	1	2	2	1	1	wallpaintings in the Chapel of the Guardian Angels, Winchester Cathedral, cC13th
62	ppr	121	161	o	fe	fa	Wo,Fe,Cu,Ve,Tx	mdpre	sb	1	2	2	2	1	8 day striking spring clock in ebonised case, by Ellicott & Co, London, c1805
63	ppr	121	161	o	ca	fa	Wo,St,Gl,Tx,Pa	edpre	sb	2	2	2	2	1	music room of Bbrighton Pavilion, c1822
64	ppr	121	191	o	fa	fa	Gl,Ag	edpre	sb	1	2	1	2	1	silver-clad glass decanter-stopper
65	ppr	121	366	o	e	f	Fe,Tx,Lh,Sn,Pb	edpre	sb	2	2	2	2	1	set of Brigandine armour (plate body armour) c1480
66	ppr	121	362	o	ca	ca	St,lp	edpre	sb	1	2	1	2	1	wallpaintings of the Jesus Chapel, Canterbury Cathedral, c 1182-4

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
67	ppr	121	330	o	ac	a	Pa,lp	mdpre	sb	1	2	1	2	2	draw ing of "Madonna & Child with cat", by Leonardo da Vinci, gall ink on paper c1478
68	ppr	121	180	o	ac	a	Tx,lp,Pp	edpre	sb	2	2	2	2	1	painting, the "Kingfisher Action" by Van de Velde the Younger, c1675-80
69	ppr	121	191	o	a	a	Tx, lp,Wo	sdpre	sb	1	2	0	1	1	folding painting by John Walker - Labyrinth IV (No. 3/1980) impasto on canvas c1980
70	ppr	121	390	o	ac	fa	Gl	edpre	sb	1	2	1	2	1	Italic glass oinochoe (No. CMG 71.1.6) c C6-5 BC in blue glass
71	pprw	121	430	o	ac	fa	Ce	edpre	sb	1	1	1	2	1	Athenian ceramic jug (white ground Lekythos) cC5th BC
72	ppr	121	371	o	e	f	Lh	edpre	sb	1	2	2	2	1	Anglo-Scandinavian shoes from York
73	ppr	121	110	o	ae	a	Tx,lp	sdpre	sb	2	2	1	2	1	collection of 6 paintings by William Charlton, late C19th, 3 showing white bloom

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
74	ppr	121	180	o	ae	a	Tx,lp	mdpre	sb	2	2	2	2	1	English embroidered picture depicting the conversion of St Paul (after Rubens) C17th
75	pw	121	350	o	e	f	Bo	edpre	sb	1	2	1	1	1	Bone knife handle excavated from Woodhall in 1993
76	pw	121	375	o	e	f	Bo,Cu,Fe	edpre/sdpost	sb	2	2	1	1	1	Bone/horn knife handle with Cu/A fittings and Fe tang, from Jarrow
77	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	Bone knife handle from Durham's Claypath, excavated 1999
78	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	Bone knife handle from Durham's Claypath, excavated 1999
79	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1	Bone knife handle from Durham's Claypath, excavated 1999
80	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1	Waterlogged leather shoe upper
81	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1	Piece of waterlogged leather with stitch holes

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
82	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1	Scrap of waterlogged leather
83	w	121	350,390	o	e	f	Lh	mdpre	sb	1	1	2	1	1	Shoe upper of waterlogged leather
84	w	121	350	o	e	f	Wo	edpre	sb	1	1	2	1	1	Fragment of oak flooring with tool marks
85	w	121	350,390	o	e	f	Lh	mdpre	sb	1	1	2	1	1	Waterlogged leather shoe from Newastle Quayside
86	w	121	350	o	e	f	Lh	edpre	sb	1	1	2	1	1	Waterlogged leather shoe from Newastle Quayside
87	w	121	350	o	e	f	Lh,Tx	mdpre	sb	1	2	2	1	1	Square piece of waterlogged calfskin leather from Newcastle Quayside
88	pw	121	350	o	e	f	Lh	edpre	sb	1	2	2	1	1	Piece of dried out calf leather possibly from a boot, Newcastle Quayside
89	pw	121	350	o	e	f	Lh	edpre	sb	1	2	2	1	1	3 pieces of calfskin - possibly shoe parts - Newcastle Quayside
90	w	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1	Cu/A token
91	w	121	350	o	e	f	Cu	edpre	sb	1	1	1	1	1	Cu/A object of tapered shape

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
92	pw	121	390	o	e	f	Fe	edpre	sb	1	2	1	1	1	Tapered Fe object, possibly a knife (Roman)
93	w	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1	Cu/A (bronze) stud with short pin
94	w	121	355	o	e	fa	Cu,Sn	edpre	sb	1	1	1	1	1	Cu/A thin plate metal punched band (with white metal plating on 1 frag)
95	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	Waterlogged wood (possibly non-arte) excavated Woodhall Moated Manor 1996
96	pw	121	180	c	e	f	Wo	mdpre	sb	1	2	2	1	1	Frags waterlogged worked wood, exc 1998
97	pw	121	350	o	e	fc	Wo	edpre	sb	1	2	2	1	1	Frags of lathe-turned wooden bowl, Woodhall exc 1997
98	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	Waterlogged timber frag, Woodhall exc 1996
99	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	Waterlogged wooden structural frag, Woodhall exc 1996

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
100	pw	121	191	o	ec	fc	Wo,Cu,Sn,Fe,Bo	mdpre	sb	1	2	2	1	1	Wooden tea caddy with compartments
101	pw	121	742	o	ac	ac	Bo	sdpre	sb	1	2	2	2	1	Carved rhino horn sculpture acc D1 from Oriental Museum
102	pw	121	350	c	e	f	Wo	edpre	sb	1	2	1	1	1	Waterlogged wood (worked) fragment, excavated at Woodhall 1996
103	pw	121	350	c	e	f	Wo	edpre	sb	1	2	2	1	1	9 frags of worked wood exc at Woodhall in ?
104	pw	121	191	o	pa	f	Wo,Fe,Tx,Bo,Lh	mdpre	sb	1	2	1	1	1	Flutina (musical instrument) from Beamish Museum
105	pw	121	191	o	p	f	Wo,Cu	edpre	sb	2	2	2	1	1	Wooden colliery shovel acc 1995-24-2 from Beamish Museum
106	pw	121	191	o	p	f	Wo,Lh,Cu,Bo,Tx	mdpre	sb	1	2	1	1	1	Concertina made in England, with trademark from Beamish Museum

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
107	pw	121	191	o	p	fa	Wo,Cu,Fe	mdpre	sb	1	2	2	2	1	Georgian wooden (mahogany, oak & pine) washstand with Fe & Cu fittlings acc 1933.233.8 from Beamish Museum
108	pw	121	831	o	e	fa	Ba,lp	mdpre	sb	2	2	2	1	2	Gourd bowl acc SAD653/4 from the Sudan Archive
109	pw	121	628	o	ec	c	Ba,Tx,St,lp,Au	mdpre	sb	2	2	1	2	2	Pair of Egyptain mummy sandals fabricated from cartonage (linen & papyrus), with linen and plaster acc 243714 9.12.6 from Oriental Museum
110	pw	121	191	o	pa	ca	Wo,Cu,Fe,lp	mdpre	sb	2	2	2	2	2	Ship model of P.O.W. WWI battleship, Emden acc 1996-155.6 from Beamish Museum
111	pw	121	191	o	p	f	Wo, Lh, Fe	mdpre	sb	1	2	1	1	2	Wooden bellows with leather & metal from Beamish Museum

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
112	pw	121	191	o	pc	fc	Wo	sdpre	sb	2	2	2	2	2	Wooden Norwegian calender staff from Stavanger from Beamish Museum
113	pw	121	191	o	p	f	Wo,Fe,Cu,Tx,Pa	mdpre	sb	1	2	2	1	1	Wooden egg box with metal
114	pw	121	742	o	ea	ac	Wo	mdpre	sb	1	2	2	1	1	Chineses wooden statuette of man with jar, accomanied by lion dog acc NM52/F1 from Oriental Museum
115	pw	121	742	o	ea	ac	Wo	mdpre	sb	1	2	2	1	1	Chinese wooden sculpture of forest scene from Oriental Museum
116	pw	121	742	o	ec	fc	Wo,Ba,St,Fr,Ip	sdpre	sb	2	2	1	2	1	Chinese writing set acc 1991-169 from Oriental Museum
117	pw	121	628	o	ec	c	Ba	mdpre	sb	1	2	2	1	2	Pair of Egyptain mummy(?) sandals in papyrus acc 170335 + 22946 from Oriental Museum

Record no.	Source material	Conserving culture	Culture conserved	Party responsible for obj	Why obj preserved	Type obj preserved	Materials	Deterioration	Who conserved obj	I	R	C	A	P	What obj is
118	pw	121	350	c	e	a	St	sdpre	sb	1	2	2	1	1	Jet beab excavated at Woodhall in 1997 SF 601
119	pw	121	620	o	e	fc	Cu,Sn,Bo,Wo	edpre	sb	2	2	1	1	2	Fragmented Cu/A dagger from tomb in Jericho from Oriental Musem
120	pw	121	712	o	ea	ca	Cu,Sn	mdpre	sb	2	2	1	1	1	Cu/A statuette of Ganesh (Hindu god) from Oriental Museum
121	pw	121	350	c	e	f	Cu,Lh	mdpre	sb	2	2	1	1	1	Cu/A belt buckle with remnants of leather exc at Woodhall SF 8568
122	pw	121	350	c	e	f	Cu,Sn,Zn	edpre	sb	2	2	1	1	1	Punched copper alloy plate
123	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	Cu/A Roman coin exc at Heyton in 1995 SF 1226
124	pw	121	350	c	e	f	Cu	mdpre	sb	2	2	1	1	1	Cu/A strap end exc at Woodhall in 1997 SF 633
125	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1	Cu/A disc (broken) exc at Woodhall in 1993 SF 177

APPENDIX 5 – QUESTIONNAIRE SOURCES OF DATA

The structured questionnaire produced 677 completed responses, of which 574 pertained to conservation undertaken by conservation laboratory culture, and the remainder distributed between Roman, Egyptian, Regimental, Native American, Maori and Aborigine cultures.

The main sources for the results were conservation literature, especially issues of 'Studies on Conservation', since these provided detailed conservation case studies, often with sufficient information to furnish a questionnaire response. Watkins and Brown's 'Conservation of ancient Egyptian Materials' (1988) supplied a number of examples of Egyptian conservation, but with the work undertaken by conservation laboratory culture, and so counted under modern conservation. Published sources tended to supply illustrations, photographs or a combination of the two, depicting conservation objects, along with provenance, function, historic background and detailed conversation treatment notes. Numerous museum catalogues, housed in libraries and museums, were scoured for examples of native repair; along with various auction catalogues.

Museums were a further source of information for the questionnaires. The following museums were visited in order to obtain information –

- Arbeia Roman Fort, South Shields – exhibition and store, supplying examples of Roman repair;
- Corbridge Museum – exhibition, supplying examples of Roman repair;
- Chesters Museum – exhibition, sought examples of Roman repair;
- The Museum of Antiquities, Newcastle – exhibition, supplying examples of Roman repair;
- The Roman Army Museum - exhibition, supplying examples of Roman repair;
- Vindolanda - exhibition, supplying examples of Roman repair;
- The Fulling Mill Museum, Durham - exhibition, sought examples of Roman repair;

- The Dorman Museum, Middlesbrough – exhibition and store, seeking examples of Egyptian, Native American and Aboriginal repair;
- British Museum, London - exhibition and store, supplying examples of Native American repair;
- The Hancock Museum, Newcastle – exhibition and store, supplying examples of Egyptian repair;
- The Oriental Museum, Durham - exhibition and store, supplying examples of Egyptian repair;
- The Durham Light Infantry Museum - exhibition and store, supplying examples of regimental repair;
- The Discovery Museum, Newcastle - exhibition and store, supplying examples of regimental repair;
- The Captain Cook Museum, Middlesbrough - exhibition and store, supplying examples of Maori repair.

These provided the majority of the non-modern information, but every time I visited a museum I had a notebook at the ready looking for examples of native repair and modern conservation.

A significant portion of questionnaire data was gleaned from conservation treatment reports, most of which were stored in conservation laboratories. In ascending order of volume of data gathered, I used records from the following sources –

- Karen Barker's records store, Northumberland
- Jennifer Jones' card store, University of Durham; and
- Student laboratory conservation records, University of Durham.

In each instance the record archives provided reports from a number of different conservators.

The majority of the records provided data to supplement the group for modern conservation. However, examples of native repair was sought within this group, by looking for examples of repairs prior to conservation.

APPENDIX 6 - CATEGORY DEFINITIONS FOR INTERPRETATION OF THE STRUCTURED QUESTIONNAIRE RESULTS

This appendix provides the definitions for the categories used in the structured questionnaire result charts:

These definitions have been designed for use in this research.

Definitions of type of object preserved:

Functional: An object that primarily serves a utilitarian purpose – a useable artefact. *Eg. Furniture, tools or buildings.*

Cultural: An object that possesses symbolic value related to those denoted in the "cultural" section of the previous category set. *E.g. Bishop's crosier, the Budget case or a flag.*

Commemorative: An object that has been designed to evoke a past event or person and is imbued, therefore, with contextual significance. *E.g. pilgrim badges, commemorative stamps, plates or coins.*

Aesthetic: An object with the primary function of pleasing the senses that has not been specifically designed to belong within the group of cultural objects or commemorative objects. *E.g. painting or sculpture.*

Definitions of reasons for why objects are preserved:

Functional: An object has been retained because it exhibits a desirable utilitarian capacity. *E.g. furniture, tools or buildings.*

Cultural: An object has been retained because it possesses a symbolic function that eclipses utilitarian value. Cultural objects possess a contextual significance and can

hail from any definable section within a society, be it religious, political or economic. *E.g. Bishop's crosier, the Budget case or a flag.*

Personal: An object has been retained because it possesses associations with the experiential past of a given individual. The value is often symbolic, since the object is past evoking, and not necessarily discernible to other parties. *E.g. a childhood toy, gift of low monetary value or trinket.*

Capital: An object has been retained primarily as an investment, because it possesses an economic or exchange value. *E.g. cut gemstones or mint coins.*

Aesthetic: An object has been retained because it has a value derived from bringing pleasure to the senses. *E.g. painting or sculpture.*

Educational: An object has been retained because it possesses a potential for study, discussion or instruction, whether the quality be apparently inherent or culturally imposed. *E.g. natural history specimens or archaeological objects.*

Definition s of damage to artefacts:

Superficial damage: There might be surface damage and/or minor structural damage, such as limited cracking, small losses or minor weaknesses and minor biological attack or chemical changes.

Moderate deterioration: Visibly obvious surface and/or structural damage, such as relatively extensive cracking, losses, weaknesses and biological attack or chemical changes.

Extensive deterioration: Extensive surface and structural damage, such as major cracking, losses, weaknesses and biological attack or chemical changes.

Deliberate "damage": Damage that has been instigated deliberately, be it as an act of veneration towards the object or as an act of vandalism.

Definitions for the different level of conservation treatment applied to artefacts:

Investigation Levels:

0 = No investigation or analysis undertaken. No evidence of action taken of an interventive or analytical nature.

1 = Simple investigation and/or analysis undertaken. There is evidence that the object might have been analysed visually and have undergone simple wet chemical and/or mechanical tests to establish material identification/condition. *E.g. early conservation practice.*

2 = Extensive and detailed investigation and/or analysis undertaken. There is evidence that the object might have been analysed with more powerful forms of visual analyses, such as SEM/X-rays. Material analysis might have been attempted with techniques such as FTIR/EDXRF. Tests for treatment suitability will almost certainly have been. *E.g. modern conservation practice.*

Recording Levels:

0 = No recording undertaken. No evidence of records of any description.

1 = Rudimentary records made. There is evidence that notes might have been made describing the work carried out, mentioning materials used, but not necessarily the quantities, concentrations or duration of treatment. There might be a simple sketch to accompany the notes. *E.g. early conservation practice.*

2 = Extensive and detailed records made. There is evidence of detailed records kept that describe and quantify the treatment methods employed, along with descriptions pertaining to the condition and composition of the object. The details are often accompanied by an annotated diagram and/or photographs and, where appropriate, X-ray plates. *E.g. modern conservation practice.*

Cleaning Levels:

0 = No cleaning undertaken. There is no evidence that cleaning of any description has been undertaken.

1 = Some cleaning undertaken. There is evidence that partial or selective cleaning, by chemical or mechanical means, of corrosion products and accretions has been undertaken. *E.g. treatment of archaeological ironwork.*

2 = Extensive cleaning undertaken. There is evidence that the object has been fully cleaned or almost fully cleaned of dirt, corrosion products and accretions, by chemical or mechanical means. *E.g. washed textiles.*

Interventive Treatment Levels:

0 = No interventive treatment administered. There is no evidence that interventive treatment of any description has been undertaken.

1 = Repaired to stabilise the condition of the object. There is evidence that minimal intervention has been employed to stabilise the object and minimise further deterioration. This might involve chemical or mechanical means. *E.g. the reassembly of broken ceramics.*

2 = Restored to working order or to emulate original appearance. There is evidence that chemical or mechanical treatment has been undertaken to enable the object to be restored to working order and/or original appearance. This might entail the inclusion of new materials. *E.g. a fully restored ceramic vessel.*

3 = Altered beyond original form or function. There is evidence that the object has been changed in such a way that it no longer resembles its original form and/or function. This will probably have entailed the introduction of new materials to the object. *E.g. the addition of unauthentic-looking limbs to broken statues or objects re-used in a non-original manner.*

Preserving Action Levels:

0 = No preserving action undertaken. There is no evidence that action specifically designed to cause the object to be preserved has been undertaken.

1 = Object stabilised through removal of environmental/physical threats. There is evidence that the physical/ambient environment of the object has been altered, either pre or post conservation, to achieve the cessation of deterioration. *E.g. objects boxed and housed in library/museum.*

2 = Specialised storage system designed for object. There is evidence that a container or chamber has been provided as part of a physically/environmentally controlled environment, either pre or post conservation. *E.g. box/chamber is fashioned especially for the object and placed in library/museum.*

Appendix 7 – Records Database

This is a database containing the full records from the structured questionnaires.

Spreadsheet containing the information from the structured questionnaire forms:

Record number	Source material	Conserving culture	Culture conserved	Party responsible for object	Why object preserved	Type of object preserved	Materials	Deterioration	Who conserved object	Balance of techniques I	R	C	A	P	Occupation	What the preserved object is	Source of the information
1	pw	121	650,712	o	ec	fc	Lh,Cu,Fe,Fr	sdpre/sdp	sb		2	2	1	1	2 c	indian/persian shield Lab No. 788	Conservation record and picture from Durham University's Conservation Teaching Laboratory
2	pw	121	742	o	ca	fa	Wo,Lh.Bo,Ag,Fe	sdpre	sb		1	2	2	1	1 c	Chinese? cutlery set comprising wooden tube covered in shagreen & containing ivory chopsticks & rod, 2 Ag forks & bowls & spoon + Fe file Lab No. 814	Conservation record and picture from Durham University's Conservation Teaching Laboratory
3	pw	121	712	o	ca	fc	Lh,Cu,Fe,Fr	mdpre	sb		1	2	1	1	2 c	buffalo hide shield from India. 1 of CuA bosses missing Lab No. 678	Conservation record and picture from Durham University's Conservation Teaching Laboratory
4	pw	121	191	o	ec	f	Lh,Tx	edpre	sb		1	2	1	1	2 c	pair leather overshoes from Seaton Delaval colliery, which opened 1838, closed 1960 Lab No. 361	Conservation record and picture from Durham University's Conservation Teaching Laboratory
5	pw	121	366	c	e	f	Lh	edpre	sb		1	2	2	1	1 c	shoe frags from Woodhall Moated Manor exc 1996 Lab No. 334	Conservation record and picture from Durham University's Conservation Teaching Laboratory
6	pw	121	350	c	e	f	Lh	edpre	sb		1	2	2	1	1 c	frags waterlogged leather from Woodhall exc 1994 Lab No. 324	Conservation record and picture from Durham University's Conservation Teaching Laboratory
7	pw	121	742	o	ae	fa	Tx,Lq,Bo,Cu	mdpre	sb		2	2	2	1	1 c	Chinese? Lacquer dish Lab No. 804	Conservation record and picture from Durham University's Conservation Teaching Laboratory
8	pw	121	628	o	ec	c	Bo	sdpre	sb		1	2	2	1	1 c	ivory Egyptian djed pillar amulet Lab No. 819	Conservation record and picture from Durham University's Conservation Teaching Laboratory
9	pw	121	350	c	ea	f	Bo,Fe	edpre	sb		2	2	1	1	1 c	ivory knife handle with Fe tang/blade embedded Lab No. 783	Conservation record and picture from Durham University's Conservation Teaching Laboratory
10	pw	121	350	o	e	f	Bo,Fe	edpre	sb		1	2	1	1	1 c	ivory knife handle with Fe tang embedded, Woodhall Lab No. 609	Conservation record and picture from Durham University's Conservation Teaching Laboratory
11	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	1	1	1 c	ivory? Tuning peg from Woodhall exc 1997 Lab No. 451	Conservation record and picture from Durham University's Conservation Teaching Laboratory
12	pw	121	191	o	ec	f	Ba,Lq	mdpre	sb		1	2	2	1	2 c	lidded basket dated 1800-1805 Lab No. 339	Conservation record and picture from Durham University's Conservation Teaching Laboratory
13	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	1	1	1 c	fish tooth, thought to be artefactual before cleaning, Woodhall exc 1997 Lab No. 415	Conservation record and picture from Durham University's Conservation Teaching Laboratory
14	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	1	1	1 c	Bone/horn/antler button Woodhall exc 1997 Lab No. 417A	Conservation record and picture from Durham University's Conservation Teaching Laboratory
15	pw	121	350	o	e	f	Bo	mdpre	sb		1	2	2	1	1 c	shell button Woodhall exc 1997 Lab No. 417B	Conservation record and picture from Durham University's Conservation Teaching Laboratory
16	pw	121	350	o	e	f	Bo	edpre	sb		1	2	1	1	1 c	bone comb Woodhall exc 1997 Lab No. 418	Conservation record and picture from Durham University's Conservation Teaching Laboratory
17	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	2	1	1 c	carved bone artefact Woodhall exc 1997 Lab No. 421	Conservation record and picture from Durham University's Conservation Teaching Laboratory
18	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	2	1	1 c	decorated bone button Woodhall exc 1997 Lab No. 422	Conservation record and picture from Durham University's Conservation Teaching Laboratory
19	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	1	1	1 c	piece of bone with holes Woodhall exc 1997 Lab No. 424	Conservation record and picture from Durham University's Conservation Teaching Laboratory
20	pw	121	350	o	e	f	Bo	edpre	sb		1	2	1	1	1 c	part of bone knife handle Woodhall exc 1997 Lab No. 428	Conservation record and picture from Durham University's Conservation Teaching Laboratory
21	pw	121	350	o	e	f	Bo	sdpre	sb		1	2	1	1	1 c	bone tuning piece Woodhall exc 1997 Lab No. 435	Conservation record and picture from Durham University's Conservation Teaching Laboratory
22	pw	121	350	o	e	f	Bo,Fe	edpre	sb		2	2	1	1	1 c	part of bone-handle knife Woodhall exc 1997 Lab No. 462	Conservation record and picture from Durham University's Conservation Teaching Laboratory
23	pw	121	180	o	e	f	Bo	edpre	sb		1	2	2	1	1 c	bone comb from Keekle High-Wrea farmhouse (17thC) exc 1987 Lab No. 601	Conservation record and picture from Durham University's Conservation Teaching Laboratory
24	pw	121	350	o	e	f	Bo,Fe	edpre	sb		2	2	1	1	1 c	bone-handled knife Woodhall exc 1992 Lab No. 602	Conservation record and picture from Durham University's Conservation Teaching Laboratory
25	pw	121	350	o	e	f	Bo,Fe	edpre	sb		2	2	1	1	1 c	bone-handled knife Woodhall exc 1992 Lab No. 603	Conservation record and picture from Durham University's Conservation Teaching Laboratory
26	pw	121	350	o	e	f	Bo,Fe	edpre	sb		2	2	1	1	1 c	bone-handled knife Woodhall exc 1991 Lab No. 606	Conservation record and picture from Durham University's Conservation Teaching Laboratory
27	pw	121	375	o	e	f	Bo	edpre	sb		1	2	2	1	1 c	bone handle from Jarrow, possibly Bede's World Lab No. 657	Conservation record and picture from Durham University's Conservation Teaching Laboratory
28	pr	121	390	o	ac	a	Gl,Pp	edpre	sb		1	2	2	2	2 c	The Portland vase	pp.56-58 Conservation Skills: Judgement, Method and Decision Making - C. Caple, 2000, Routledge, London
29	pr	121	800	c	ca	fa	Lh,Pp,Fr,Ip	mdpre	sb		2	2	2	2	2 c	seal gut parka from arctic circle	pp. 17-24 The Conservator No. 10 1986, Morrison, L., "The conservation of seal gut parkas" Ed. S. Keene, UKIC, UK
30	pr	121	330	o	ac	a	Pa,Tx,Ip,Pp	edpre	sb		1	2	2	1	2 c	cartoon of Henry VII & VIII on hand-made paper, by Hans Holbein c1536	pp. 17-24 The Conservator No. 10 1986, Fairbrass, S. & Holmes, K., "The restoration of Hans Holbein's cartoon of Henry VIII and Henry VII" Ed. S. Keene, UKIC, UK
31	pr	121	330	o	ac	a	Pa,Tx,Ip,Pp,Wo	edpre/ndpost	sb		2	2	1	2	2 c	cartoon of Virgin & Child, with St Anne & St John the Baptist, by Leonardo Da Vinci c1507-8	pp. 28-41 Harding, E. & Oddy A., "Leonardo Da Vinci's cartoon of the Virgin & Child with St. Anne and John the Baptist", 1992, in The Art of the Conservator", Ed. A. Oddy, British Museum Press, London
32	ppr	121	191	o	ca	fa	Gl,Wo,Pp,Ag	edpre	sb		1	2	1	1	1 c	mirror etched with Sackville coat of arms, c1691	pp. 3-13 The Conservator No. 9 1985, Davison, S. & Jackson, P. "The restoration of flat glass: four case studies", Ed. S. Keene, UKIC, UK
33	ppr	121	191	o	af	fa	Gl,Wo,Pa,Pp,Ag	edpre	sb		1	2	1	1	1 c	N. Italian C17th mirror, etched with decorative sections attached around main mirror	pp. 3-13 The Conservator No. 9 1985, Davison, S. & Jackson, P. "The restoration of flat glass: four case studies", Ed. S. Keene, UKIC, UK
34	ppr	121	140	o	ac	ac	Gl,Ip,Pp	sdpre	sb		1	2	1	2	1 c	hinter glasmalerei (reverse painted glass) depiction of sailing ship, Elizabeth of Sunderland, c1835	pp. 3-13 The Conservator No. 9 1985, Davison, S. & Jackson, P. "The restoration of flat glass: four case studies", Ed. S. Keene, UKIC, UK
35	ppr	121	180	o	af	fa	Wo,Gl,Bo,Ip,Pp	edpre	sb		1	2	1	1	1 c	Spanish ebony & tortoise-shell cabinet, with reverse-painted glass panels, mid C17th	pp. 3-13 The Conservator No. 9 1985, Davison, S. & Jackson, P. "The restoration of flat glass: four case studies", Ed. S. Keene, UKIC, UK
36	ppr	121	180	o	a	a	Tx,?,Pa	sdpre	sb		1	2	2	1	2 c	C17th embroidery on linen, with tent stitch in coloured silk thread	pp. 22-25 The Conservator No. 9 1985, Singer, L. V. "The mounting of an embroidery onto fabric-covered Perspex", Ed. S. Keene, UKIC, UK
37	ppr	121	965	o	ca	ca	Wo,Bo,St,Ip,Pp	edpre	sb		2	2	1	1	1 c	Maori model canoe decorated with carving, shells, stones & paint (red/black) c1860	pp. 26-32 The Conservator No. 9 1985, Bacon, L. "The examination, analysis & conservation of a Maori model canoe", Ed. S. Keene, UKIC, UK
38	ppr	121	366	o	cf	cf	Tx,Fr,Wo	edpre	sb		1	2	2	2	1 c	cap of maintenance from York, work by Mayor's esquire of the sword, c1580	pp. 25-30 The Conservator No. 10 1986, Landi, S. "The York Cap of Maintenance", Ed. S. Keene, UKIC,UK
39	ppr	121	110	o?	a	a	Tx,Ip,Pp,Wo	sdpre	sb		2	2	0	1	1 c	"Meryon" oil painting on flax canvous, by Franz Kline	pp. 31-36 The Conservator No. 10 1986, Rider, N., Ed. S. Keene, UKIC, UK
40	pr	121	110	o	a	a	Tx,Pp,Wo?	sdpre	sb		2	2	0	1	1 c	"Deep Black Purple" acrylic painting on Duck canvas, by Robert Law c1970s	The Conservator No. 1 1977
41	ppr	121	395	o	ae	fa	St,Ip	edpre	sb		2	2	1	1	1 c	Roman wallplaster from Norfolk Street Roman villa, Leicester, cC2nd-3rd AD	pp. 37-43 The Conservator No. 10 1986, Sturge, T. "The reassembly and display of fallen wallplaster from Leicester", Ed. S. Keene, UKIC, UK
42	ppr	121	350	c	ce	c	St	edpre	sb		1	2	1	0	0 c	pillar of Eliseg C9th stone pillar	pp. 6-11 The Conservator No, 6 1982, Watkinson, D. "Making a large scale replica", Ed. S. Hackney, UKIC, UK
43	ppr	121	140	o	c	f	Gl	edpre/sdpre	sb		1	2	1	2	1 c	engraved wine glass, cC19th	pp. 35-36 The Conservator No. 6 1982, Jackson, P. "A dowelling technique for glass restoration", Ed S. Hackney, UKIC, UK

44	ppr	121	161	o	ca	a	Ce,Wo,Fe,Cu,Sn	edpre	sb	2	2	2	2	1 c	porcelain centrepiece of the Sevres Egyptian service, c1810	pp. 37-44 The Conservator No. 6 1982, Harris, R. & Service, S. "The conservation of the centrepiece of the Sevres Egyptian table service", Ed. S. Hackney, UKIC, UK
45	ppr	121	350,362	o	ce	f	Ce	edpre	sb	1	2	2	2	1 c	medieval floor tiles at Norton Priory c1134	pp.45-48 The Conservator No. 6 1982 , Johnson, B. & Bearpark, P. "The conservation of Medieval floor tiles at Norton Priory", Ed. S. Hackney, UKIC, UK
46	ppr	121	180	o	ca	fc	Tx,Wo,Fe	mdpre	sb	2	2	1	2	1 c	late C17th state bed from Melville House	pp. 3-14 The Conservator No. 24 2000, Hillyer, L et al "The reassembly of a seventeenth-century state bed", Ed. J. Cronyn, UKIC, UK
47	ppr	121	110	o	ec	fc	Tx,Pp,Fe	mdpre/mdpost	sb	2	2	0	1	2 c	1890s woman's rubberised wool raincoat, by Currie, Thomsom & Co of Edinburgh & London - impenetrable ladies waterproof	pp. 24-38 The Conservator No. 24 2000, Nuttens, F. & Tinker, Z. "The conservation of rubberised textiles: two case histories", Ed. J. Cronyn, UKIC, UK
48	ppr	121	110	o	ec	f	Tx,Pp,Fe	edpre	sb	2	2	1	1	1 c	1968 rubberised viscose flight bag from "the World Airways" USA	pp. 24-38 The Conservator No. 24 2000, Nuttens, F. & Tinker, Z. "The conservation of rubberised textiles: two case histories", Ed. J. Cronyn, UKIC, UK
49	ppr	121	395	o	ca	fa	St,Ce,Ip	edpre	sb	2	2	1	1	1 c	Mosaic floor of Venus from Hemsworth Roman villa, Dorset	pp. 61-68 The Conservator No. 24 2000, Middleton, T. et al "The materials, conservation & re-mounting of the Hemsworth Venus mosaic", Ed. J. Cronyn, UKIC, UK
50	ppr	121	140	o	e	fc	Lh,Ip	sdpre	sb	2	2	2	2	1 c	C18th parchment document 1799	pp. 71-79 The Conservator No, 24 2000, Cooper, M. et al "Laser cleaning of an eighteenth century parchment document", Ed. J. Cronyn, UKIC, UK
51	ppr	121	390	o	ce	fc	Lh,Tx	edpre	sb	1	2	1	2	1 c	Romano-Egyptian leather cuirass & helmet cC3-4th AD	pp. 80-88 The Conservator No. 24 2000, Willis, B. "A review of the conservation treatment of a Roman-Egyptian cuirass and helmet made from crocodile skin", Ed. J. Cronyn, UKIC, UK
52	ppr	121	180	o	ca	ac	Tx,Pa,Pp	edpre	sb	2	2	2	2	1 c	embroidered picture of "the expulsion of Hagar & Ishmael" c1660	pp. 89-95 The Conservator No. 24 2000, Lord, A. & Sutcliffe, H. "Combining cold lining and solvent reactivation for the treatment of an embroidered silk picture: a case study", Ed. J. Cronyn, UKIC, UK
53	ppr	121	362	o	ae	ca	St,Ip,Pb,Pp	edpre	sb	2	2	1	2	1 c	wall painting of St Stwphen's Chapel, Westminster 1350-65	pp. 9-12 The Conservator No. 2 1978, Van Geersdaele, P. C. & Goldsmith, J. "The restoration of wallpainting fragments from St. Stephen's Chapel Westminster", Ed. S. Davison, UKIC, UK
54	ppr	121	395	o	e	f	Fe,Wo,Lh	edpre	sb	2	2	2	1	1 c	Roman chest from Roman villa at Bradwell, Milton Keynes, c C1-C2 AD	The Conservator No. 2 1978
55	ppr	121	362	o	ca	ca	St	edpre	sb	1	2	2	2	1 c	marble sculpture of Sir Orlando Gee, by Francis Bird 1705	pp. 20-25 The Conservator No. 2 1978, Larson, J. "The conservation of marble monuments in churches", Ed. S. Davison, UKIC, UK
56	pr	121	362	o	ca	ca	St	edpre	sb	1	2	2	2	1 c	marble sculpture of Anne Tolson, by William Halfpenny c1750	pp. 20-25 The Conservator No. 2 1978, Larson, J. "The conservation of marble monuments in churches", Ed. S. Davison, UKIC, UK
57	ppr	121	330	o	ac	fa	Tx,Ip	edpre	sb	1	2	1	2	1 c	Ulysees tapestry from Hardwick Hall, wool & silk with painted inscription C16th	pp. 26-29 The Conservator No. 2 1978, Marko, K. "Experiments in supporting tapestry using the adhesive method", Ed. S. Davidson, UKIC, UK
58	pr	121	191	o	ce	fc	Wo,Fe	edpre	sb	1	2	1	1	1 c	Gypsy caravan wheel on caravan No, A3298	pp.32-34 The Conservator No. 2 1978, Monger, G. "Conservation of wooden vehicles", Ed. S. Davison, UKIC, UK
59	pr	121	191	o	ef	f	Wo,Fe,Ip	edpre	sb	1	2	2	2	1 c	tumbril registration No. A1694	pp.32-34 The Conservator No. 2 1978, Monger, G. "Conservation of wooden vehicles", Ed. S. Davison, UKIC, UK
60	pr	121	191	o	ef	f	Wo,Fe,Ip	edpre	sb	1	2	2	2	1 c	tumbril registration No. A2267	pp.32-34 The Conservator No. 2 1978, Monger, G. "Conservation of wooden vehicles", Ed. S. Davison, UKIC, UK
61	ppr	121	362	o	ca	ca	St,Ip,Au	mdpre	sb	1	2	2	1	1 c	wallpaintings in the Chapel of the Guardian Angels, Winchester Cathedral, cC13th	pp. 17-21 The Conservator No. 1 1977, Baker, R. W. & Baker, E. "An account of the painted vault in the chapel of the Guardian Angels, Winchester Cathedral", Ed. S. Davison, UKIC, UK
62	ppr	121	161	o	fe	fa	Wo,Fe,Cu,Ve,Tx	mdpre	sb	1	2	2	2	1 c	8 day striking spring clock in ebonised case, by Ellicott & Co, London, c1805	pp. 36-44 The Conservator No. 9 1985, Betts, J. "Problems in the conservation of clocks and watches", Ed. S. Keene, UKIC, UK
63	ppr	121	161	o	ca	fa	Wo,St,Gl,Tx,Pa	edpre	sb	2	2	2	2	1 c	music room of Brighton Pavilion, c1822	pp. 5-11 The Conservator No. 4 1980 , Rogers, S. "The approach to restoration of the Music Room, Brighton Pavilion, following arson in 1975", Ed. S. Davison, UKIC, UK
64	ppr	121	191	o	fa	fa	Gl,Ag	edpre	sb	1	2	1	2	1 c	silver-clad glass decanter-stopper	The Conservator No. 4 1980
65	ppr	121	366	o	e	f	Fe,Tx,Lh,Sn,Pb	edpre	sb	2	2	2	2	1 c	set of Brigandine armour (plate body armour) c1480	pp. 3-7 The Conservator No. 8 1984, Smith, R. "The conservation of a Brigandine", Ed. S. Hackney, UKIC, uk
66	ppr	121	362	o	ca	ca	St,Ip	edpre	sb	1	2	1	2	1 c	wallpaintings of the Jesus Chapel, Canterbury Cathedral, c 1182-4	pp. 15-21 The Conservator No. 8 1984, Langslow, D. et al "The restoration of the painted ceiling, The Jesus Cahpel, Canterbury", Ed. S. Hackney, UKIC, UK
67	ppr	121	330	o	ac	a	Pa,Ip	mdpre	sb	1	2	1	2	2 c	drawing of "Madonna & Child with cat", by Leonardo da Vinci, gall ink on paper c1478	pp. 22-25 The Conservator No. 8 1984, Astley, V. "Conservation and restoration of 'Madonna & Child with cat' - a drawing by Leonardo Da Vinci", Ed. S. Hackney, UKIC, UK
68	ppr	121	180	o	ac	a	Tx,Ip,Pp	edpre	sb	2	2	2	2	1 c	painting, the "Kingfisher Action" by Van de Velde the Younger, c1675-80	The Conservator No.4 1980
69	ppr	121	191	o	a	a	Tx, Ip,Wo	sdpre	sb	1	2	0	1	1 c	folding painting by John Walker - Labyrinth IV (No. 3/1980) impasto on canvas c1980	pp. 35-40 The Conservator No. 8 1984, Scott-Moncrieff, A. "The modification of a folding picture", Ed. S. Hackney, UKIC, UK
70	ppr	121	390	o	ac	fa	Gl	edpre	sb	1	2	1	2	1 c	Italic glass oinochoe (No. CMG 71.1.6) c C6-5 BC in blue glass	pp. 33-47 The Conservator No. 7 1983, Jackson, P. "Restoration of an italic glass oinochoe with Technivot 4004a", Ed. S. Hackney, UKIC, UK
71	pprw	121	430	o	ac	fa	Ce	edpre	sb	1	1	1	2	1 c	Athenian ceramic jug (white ground Lekythos) cC5th BC	pp.9-12 The Conservator No. 7 1983, Bradley, S. "Conservation recording in the British Museum", Ed. S. Hackney, UKIC, UK
72	ppr	121	371	o	e	f	Lh	edpre	sb	1	2	2	2	1 c	Anglo-Scandinavian shoes from York	pp.18-23 The Conservator No. 7 1983, Peacock, E. "The conservation of some Anglo-Scandinavian leather shoes", Ed. S. Hackney, UKIC, UK
73	ppr	121	110	o	ae	a	Tx,Ip	sdpre	sb	2	2	1	2	1 c	collection of 6 paintings by William Charlton, late C19th, 3 showing white bloom	pp. 3-9 The Conservator No. 19 1995, Singer, B. et al "Examination of a blooming problem in a collection of unvarnished oil paintings", Ed. C. Villers , UKIC, UK
74	ppr	121	180	o	ae	a	Tx,Ip	mdpre	sb	2	2	2	2	1 c	English embroidered picture depicting the conversion of St Paul (after Rubens) C17th	pp. 29-35 The Conservator No. 19 1995, Kie, M. & Webber, P. "The conservation of an English embroidered picture using an oriental paper method: a joint approach", Ed. C. Villers, UKIC, UK
75	pw	121	350	o	e	f	Bo	edpre	sb	1	2	1	1	1 c	Bone knife handle excavated from Woodhall in 1993 Lab No. 604	Conservation record and picture from Durham University's Conservation Teaching Laboratory
76	pw	121	375	o	e	f	Bo,Cu,Fe	edpre/sdpost	sb	2	2	1	1	1 c	Bone/horn knife handle with Cu/A fittings and Fe tang, from Jarrow Lab No. 669	Conservation record and picture from Durham University's Conservation Teaching Laboratory
77	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1 c	Bone knife handle from Durham's Claypath, excavated 1999 Lab No. 777	Conservation record and picture from Durham University's Conservation Teaching Laboratory
78	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1 c	Bone knife handle from Durham's Claypath, excavated 1999 Lab No. 787	Conservation record and picture from Durham University's Conservation Teaching Laboratory
79	pw	121	180	o	e	f	Bo,Fe	edpre	sb	2	2	1	1	1 c	Bone knife handle from Durham's Claypath, excavated 1999 Lab No. 790	Conservation record and picture from Durham University's Conservation Teaching Laboratory
80	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1 c	Waterlogged leather shoe upper from Newcastle Quayside QQS 630 189	Conservation record from Durham University's Conservation Teaching Laboratory
81	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1 c	Piece of waterlogged leather with stitch holes from Newcastle Quayside QQS 645 294	Conservation record from Durham University's Conservation Teaching Laboratory
82	w	121	350,390	o	e	f	Lh	edpre	sb	1	1	2	1	1 c	Scrap of waterlogged leather from Newcastle Quayside 84 637 SF238	Conservation record from Durham University's Conservation Teaching Laboratory
83	w	121	350,390	o	e	f	Lh	mdpre	sb	1	1	2	1	1 c	Shoe upper of waterlogged leather from Newcastle Quayside 84 QQS 651 SF306	Conservation record from Durham University's Conservation Teaching Laboratory
84	w	121	350	o	e	f	Wo	edpre	sb	1	1	2	1	1 c	Fragment of oak flooring with tool marks from Newcastle Quay 574	Conservation record from Durham University's Conservation Teaching Laboratory
85	w	121	350,390	o	e	f	Lh	mdpre	sb	1	1	2	1	1 c	Waterlogged leather shoe from Newastle Quayside Lab No. DUCL 5520	Conservation record from Durham University's Conservation Teaching Laboratory
86	w	121	350	o	e	f	Lh	edpre	sb	1	1	2	1	1 c	Waterlogged leather shoe from Newastle Quayside Lab No. DUCL 5520 (different object to previous entry)	Conservation record from Durham University's Conservation Teaching Laboratory
87	w	121	350	o	e	f	Lh,Tx	mdpre	sb	1	2	2	1	1 c	Square piece of waterlogged calfskin leather from Newcastle Quayside Lab No. DUCL 5522	Conservation record and picture from Durham University's Conservation Teaching Laboratory
88	pw	121	350	o	e	f	Lh	edpre	sb	1	2	2	1	1 c	Piece of dried out calf leather possibly from a boot, Newcastle Quayside Lab No. DUCL 5522	Conservation record and picture from Durham University's Conservation Teaching Laboratory
89	pw	121	350	o	e	f	Lh	edpre	sb	1	2	2	1	1 c	3 pieces of calfskin - possibly shoe parts - Newcastle Quayside Lab No. DUCL 5522	Conservation record and picture from Durham University's Conservation Teaching Laboratory

90	w	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1	c	Cu/A token DG 85 30 SF35	Conservation record from Durham University's Conservation Teaching Laboratory
91	w	121	350	o	e	f	Cu	edpre	sb	1	1	1	1	1	c	Cu/A object of tapered shape 1394.1896 589 SF1099	Conservation record from Durham University's Conservation Teaching Laboratory
92	pw	121	390	o	e	f	Fe	edpre	sb	1	2	1	1	1	c	Tapered Fe object, possibly a knife (Roman) from Shiptonthorpe (KINCM) 1398.1983 844 SF1561 Lab No. 5520	Conservation record and picture from Durham University's Conservation Teaching Laboratory
93	w	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1	c	Cu/A (bronze) stud with short pin from Shiptonthorpe (KINCM) 1398.1986 SF1263 Lab No. 5520	Conservation record from Durham University's Conservation Teaching Laboratory
94	w	121	355	o	e	fa	Cu,Sn	edpre	sb	1	1	1	1	1	c	Cu/A thin plate metal punched band (with white metal plating on 1 frag) from Deanery Gardens, Cathedral DG 85 Lab No. 5520	Conservation record from Durham University's Conservation Teaching Laboratory
95	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	c	Waterlogged wood (possibly non-arte) excavated Woodhall Moated Manor 1996 Lab No. 769	Conservation record and picture from Durham University's Conservation Teaching Laboratory
96	pw	121	180	c	e	f	Wo	mdpre	sb	1	2	2	1	1	c	Frags waterlogged worked wood, exc 1998 Lab No. 643	Conservation record and picture from Durham University's Conservation Teaching Laboratory
97	pw	121	350	o	e	fc	Wo	edpre	sb	1	2	2	1	1	c	Frags of lathe-turned wooden bowl, Woodhall exc 1997 Lab No. 437	Conservation record and picture from Durham University's Conservation Teaching Laboratory
98	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	c	Waterlogged timber frag, Woodhall exc 1996 Lab No. 410	Conservation record and picture from Durham University's Conservation Teaching Laboratory
99	pw	121	350	o	e	f	Wo	edpre	sb	1	2	2	1	1	c	Waterlogged wooden structural frag, Woodhall exc 1996 Lab No. 176	Conservation record and picture from Durham University's Conservation Teaching Laboratory
100	pw	121	191	o	ec	fc	Wo,Cu,Sn,Fe,Bo	mdpre	sb	1	2	2	1	1	c	Wooden tea caddy with compartments Lab No. 820	Conservation record and picture from Durham University's Conservation Teaching Laboratory
101	pw	121	742	o	ac	ac	Bo	sdpre	sb	1	2	2	2	1	c	Carved rhino horn sculpture acc D1 from Oriental Museum Lab No. 794	Conservation record and picture from Durham University's Conservation Teaching Laboratory
102	pw	121	350	c	e	f	Wo	edpre	sb	1	2	1	1	1	c	Waterlogged wood (worked) fragment, excavated at Woodhall 1996 Lab No. 179	Conservation record and picture from Durham University's Conservation Teaching Laboratory
103	pw	121	350	c	e	f	Wo	edpre	sb	1	2	2	1	1	c	9 frags of worked wood exc at Woodhall Lab No. 184	Conservation record and picture from Durham University's Conservation Teaching Laboratory
104	pw	121	191	o	pa	f	Wo,Fe,Tx,Bo,Lh	mdpre	sb	1	2	1	1	1	c	Flutina (musical instrument) from Beamish Museum Lab No. 363	Conservation record and picture from Durham University's Conservation Teaching Laboratory
105	pw	121	191	o	p	f	Wo,Cu	edpre	sb	2	2	2	1	1	c	Wooden colliery shovel acc 1995-24-2 from Beamish Museum Lab No. 369	Conservation record and picture from Durham University's Conservation Teaching Laboratory
106	pw	121	191	o	p	f	Wo,Lh,Cu,Bo,Tx	mdpre	sb	1	2	1	1	1	c	Concertina made in England, with trademark from Beamish Museum Lab No. 372	Conservation record and picture from Durham University's Conservation Teaching Laboratory
107	pw	121	191	o	p	fa	Wo,Cu,Fe	mdpre	sb	1	2	2	2	1	c	Georgian wooden (mahogany, oak & pine) washstand with Fe & Cu fittlings acc 1933.233.8 from Beamish Museum Lab No. 373	Conservation record and picture from Durham University's Conservation Teaching Laboratory
108	pw	121	831	o	e	fa	Ba,Ip	mdpre	sb	2	2	2	1	2	c	Gourd bowl acc SAD653/4 from the Sudan Archive Lab No. 377	Conservation record and picture from Durham University's Conservation Teaching Laboratory
109	pw	121	628	o	ec	c	Ba,Tx,St,Ip,Au	mdpre	sb	2	2	1	2	2	c	Pair of Egyptain mummy sandals fabricated from cartonage (linen & papyrus), with linen and plaster acc 243714 9.12.6 from Oriental Museum Lab No. 545	Conservation record and picture from Durham University's Conservation Teaching Laboratory
110	pw	121	191	o	pa	ca	Wo,Cu,Fe,Ip	mdpre	sb	2	2	2	2	2	c	Ship model of P.O.W. WWI battleship, Emden acc 1996-155.6 from Beamish Museum Lab No. 378	Conservation record and picture from Durham University's Conservation Teaching Laboratory
111	pw	121	191	o	p	f	Wo, Lh, Fe	mdpre	sb	1	2	1	1	2	c	Wooden bellows with leather & metal from Beamish Museum Lab No. 529	Conservation record and picture from Durham University's Conservation Teaching Laboratory
112	pw	121	191	o	pc	fc	Wo	sdpre	sb	2	2	2	2	2	c	Wooden Norwegian calender staff from Stavanger from Beamish Museum Lab No. 538	Conservation record and picture from Durham University's Conservation Teaching Laboratory
113	pw	121	191	o	p	f	Wo,Fe,Cu,Tx,Pa	mdpre	sb	1	2	2	1	1	c	Wooden egg box with metal Lab No. 541	Conservation record and picture from Durham University's Conservation Teaching Laboratory
114	pw	121	742	o	ea	ac	Wo	mdpre	sb	1	2	2	1	1	c	Chineses wooden statuette of man with jar, accomanied by lion dog acc NM52/F1 from Oriental Museum Lab No. 798	Conservation record and picture from Durham University's Conservation Teaching Laboratory
115	pw	121	742	o	ea	ac	Wo	mdpre	sb	1	2	2	1	1	c	Chinese wooden sculpture of forest scene from Oriental Museum Lab No. 807	Conservation record and picture from Durham University's Conservation Teaching Laboratory
116	pw	121	742	o	ec	fc	Wo,Ba,St,Fr,Ip	sdpre	sb	2	2	1	2	1	c	Chinese writing set acc 1991-169 from Oriental Museum Lab No. 813	Conservation record and picture from Durham University's Conservation Teaching Laboratory
117	pw	121	628	o	ec	c	Ba	mdpre	sb	1	2	2	1	2	c	Pair of Egyptain mummy(?) sandals in papyrus acc 170335 + 22946 from Oriental Museum Lab No. 817	Conservation record and picture from Durham University's Conservation Teaching Laboratory
118	pw	121	350	c	e	a	St	sdpre	sb	1	2	2	1	1	c	Jet bead excavated at Woodhall in 1997 SF 601 Lab No. 987	Conservation record and picture from Durham University's Conservation Teaching Laboratory
119	pw	121	620	o	e	fc	Cu,Sn,Bo,Wo	edpre	sb	2	2	1	1	2	c	Fragmented Cu/A dagger from tomb in Jericho from Oriental Musem Lab No. 535	Conservation record and picture from Durham University's Conservation Teaching Laboratory
120	pw	121	712	o	ea	ca	Cu,Sn	mdpre	sb	2	2	1	1	1	c	Cu/A statuette of Ganesh (Hindu god) from Oriental Museum Lab No. 544	Conservation record and picture from Durham University's Conservation Teaching Laboratory
121	pw	121	350	c	e	f	Cu,Lh	mdpre	sb	2	2	1	1	1	c	Cu/A belt buckle with remnants of leather exc at Woodhall SF 8568 Lab No. 567	Conservation record and picture from Durham University's Conservation Teaching Laboratory
122	pw	121	350	c	e	f	Cu,Sn,Zn	edpre	sb	2	2	1	1	1	c	Punched copper alloy plate Lab No. 568	Conservation record and picture from Durham University's Conservation Teaching Laboratory
123	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Roman coin exc at Heyton in 1995 SF 1226 Lab No. 569	Conservation record and picture from Durham University's Conservation Teaching Laboratory
124	pw	121	350	c	e	f	Cu	mdpre	sb	2	2	1	1	1	c	Cu/A strap end exc at Woodhall in 1997 SF 633 Lab No. 571	Conservation record and picture from Durham University's Conservation Teaching Laboratory
125	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1	c	Cu/A disc (broken) exc at Woodhall in 1993 SF 177 Lab No. 572	Conservation record and picture from Durham University's Conservation Teaching Laboratory
126	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Heyton in 1995 SF 1233 Lab No. 573	Conservation record and picture from Durham University's Conservation Teaching Laboratory
127	pw	121	395	c	e	cf	Cu,Ag	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Hayton in 1995 SF 509 Lab No. 574	Conservation record and picture from Durham University's Conservation Teaching Laboratory
128	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Heyton in 1995 SF 513 Lab No. 577	Conservation record and picture from Durham University's Conservation Teaching Laboratory
129	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Heyton in 1995 SF 628 Lab No. 578	Conservation record and picture from Durham University's Conservation Teaching Laboratory
130	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1	c	Cu/A strap end exc at Woodhall in 1997 SF 542 Lab No. 579	Conservation record and picture from Durham University's Conservation Teaching Laboratory
131	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1	c	Cu/A ferrul exc at Woodhall in 1997 SF 603 Lab No. 580	Conservation record and picture from Durham University's Conservation Teaching Laboratory
132	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Heyton in 1995 SF 631 Lab No. 581	Conservation record and picture from Durham University's Conservation Teaching Laboratory
133	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1	c	Cu/A Romano-British coin exc at Heyton in 1995 SF 1175 Lab No. 582	Conservation record and picture from Durham University's Conservation Teaching Laboratory
134	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1	c	Cu/A hook exc at Woodhall in 1993 SF 181 Lab No. 583	Conservation record and picture from Durham University's Conservation Teaching Laboratory
135	pw	121	350	c	e	f	Cu	mdpre	sb	2	2	1	1	1	c	Cu/A domed object (button) exc at Woodhall in 1997 SF 600 Lab No. 584	Conservation record and picture from Durham University's Conservation Teaching Laboratory

136	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Heyton in 1995 SF 1374 Lab No. 570	Conservation record and picture from Durham University's Conservation Teaching Laboratory
137	pw	121	395 c	e	cf	Cu,Ag,Pb,Sn	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin (leaded bronze with silver plating ?) exc at Hayton in 1995 SF 1073 Lab No. 585	Conservation record and picture from Durham University's Conservation Teaching Laboratory
138	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 3817 Lab No. 586	Conservation record and picture from Durham University's Conservation Teaching Laboratory
139	pw	121	395 c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 1412 Lab No. 595	Conservation record and picture from Durham University's Conservation Teaching Laboratory
140	pw	121	395 o	e	cf	Cu	edpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin from JC's swag bag, very badly corroded Lab No. 598	Conservation record and picture from Durham University's Conservation Teaching Laboratory
141	pw	121	395 o	e	cf	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin from JC's swag bag Lab No. 599	Conservation record and picture from Durham University's Conservation Teaching Laboratory
142	pw	121	395 o	e	cf	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A coin (fake) from JC's swag bag Lab No. 600	Conservation record and picture from Durham University's Conservation Teaching Laboratory
143	pw	121	395 o	e	af	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British ring from Jarrow Lab No. 655	Conservation record and picture from Durham University's Conservation Teaching Laboratory
144	pw	121	395 o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A length (short) of tubular "wire" (perhaps for jewellery) exc at Jarrow in 1970 Lab No. 658	Conservation record and picture from Durham University's Conservation Teaching Laboratory
145	pw	121	350 c	e	f	Cu	edpre	sb	1	2	1	1	2 c	Cu/A spoon bowl exc at Marton in 1996 Lab No. 668	Conservation record and picture from Durham University's Conservation Teaching Laboratory
146	pw	121	350 c	e	a	Cu,Ag,Sn,Pb	mdpre	sb	2	2	1	1	1 c	Cu/A harness fitting (?) in silvered bronze exc at Marton in 1995 Lab No. 689	Conservation record and picture from Durham University's Conservation Teaching Laboratory
147	pw	121	180 c	e	fa	Cu,Ve	mdpre	sb	1	2	1	1	2 c	Circular plate brooch with incised decoration and enamel Lab No. 690	Conservation record and picture from Durham University's Conservation Teaching Laboratory
148	pw	121	350 c	e	f	Cu,Lh	mdpre	sb	2	2	1	1	1 c	Cu/A fitting made from hammered & folded sheet exc at Woodhall in 1993 SF 193 Lab No. missing	Conservation record and picture from Durham University's Conservation Teaching Laboratory
149	pw	121	350 c	e	f	Cu,Sn	edpre	sb	2	2	1	1	1 c	3 frags of Cu/A (bronze). 1 piece poss a button exc at Woodhall SF 729 Lab No. 693	Conservation record and picture from Durham University's Conservation Teaching Laboratory
150	pw	121	180 c	e	fa	Cu,Sn,Pb,Zn	mdpre	sb	2	2	1	1	1 c	Tinned brass waistcoat button exc at Woodhall in 1993 Lab No. 694	Conservation record and picture from Durham University's Conservation Teaching Laboratory
151	pw	121	180 c	e	f	Cu,Zn,Ni	edpre	sb	2	2	1	1	1 c	Cu/A (German silver) fragmented spoon with hallmark exc at Woodhall in 1991 SF 57 Lab No. 695	Conservation record and picture from Durham University's Conservation Teaching Laboratory
152	pw	121	350 c	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A pin or probe exc at Marton in 1995 SF 356 Lab No. 696	Conservation record and picture from Durham University's Conservation Teaching Laboratory
153	pw	121	350 c	e	fa	Cu	edpre	sb	2	2	1	1	1 c	CU/A ferule (tubular fitting) exc at Woodhall in 1997 SF 535 Lab No. 697	Conservation record and picture from Durham University's Conservation Teaching Laboratory
154	pw	121	350 c	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A section of tubing (or rolled sheet) exc at Woodhall in 1997 SF 608 Lab No. 698	Conservation record and picture from Durham University's Conservation Teaching Laboratory
155	pw	121	180 c	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A "seal matrix" with Latin inscription exc at Marton in 1996 SF 477E Lab No. 699	Conservation record and picture from Durham University's Conservation Teaching Laboratory
156	pw	121	350 c	e	f	Cu,Zn,Sn,Pb	edpre	sb	2	2	1	1	1 c	3 strips of Cu/A channelling (join together) exc at Woodhall in 1997 SF 562 Lab No. 700	Conservation record and picture from Durham University's Conservation Teaching Laboratory
157	pw	121	395 c	e	f	Ag,Cu	mdpre	sb	2	2	1	1	1 c	High silver content Cu/A medical instrument (hook & screw) exc at Marton in 1996 SF 527G Lab No. 701	Conservation record and picture from Durham University's Conservation Teaching Laboratory
158	pw	121	350 c	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A thimble exc at Woodhall in 1994 SF 364 Lab No. 702	Conservation record and picture from Durham University's Conservation Teaching Laboratory
159	pw	121	350 c	e	f	Cu, Lh	mdpre	sb	2	2	1	1	2 c	Cu/A strap end with remains of leather preserved exc at Woodhall in 1997 SF 544 Lab No. 704	Conservation record and picture from Durham University's Conservation Teaching Laboratory
160	pw	121	395 c	e	fa	Cu,Pb,Sn,Zn	mdpre	sb	2	2	1	1	1 c	Cu/A belt strap end exc at Marton in 1995 SF 310F Lab No. 705	Conservation record and picture from Durham University's Conservation Teaching Laboratory
161	pw	121	395 c	e	f	Cu,Ip	mdpre	sb	1	2	1	1	1 c	Cu/A belt "dangler" (tool) exc at Marton in 1995 SF 303F Lab No. 706	Conservation record and picture from Durham University's Conservation Teaching Laboratory
162	pw	121	350 c	e	fa	Cu,Pb,Sn,Au	mdpre	sb	2	2	1	1	1 c	Group of 3 Cu/A buttons (diff alloys) exc at Woodhall in 1990 Lab No. 707	Conservation record and picture from Durham University's Conservation Teaching Laboratory
163	pw	121	395 c	e	af	Cu	edpre	sb	1	2	1	1	1 c	Cu/A bracelet? (3 strands Cu/A twisted together with section) exc at Marton in 1995 Lab No. 708	Conservation record and picture from Durham University's Conservation Teaching Laboratory
164	pw	121	350 c	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A ferule (oval) exc at Woodhall in 1997 SF 539 Lab No. 710	Conservation record and picture from Durham University's Conservation Teaching Laboratory
165	pw	121	350 c	e	f	Cu	edpre	sb	2	2	1	1	1 c	4 Cu/A strips exc at Woodhall in 1992 SF 108 Lab No. 711	Conservation record and picture from Durham University's Conservation Teaching Laboratory
166	pw	121	295 c	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A button & loop exc at Marton in 1996 SF 507C Lab No. 712	Conservation record and picture from Durham University's Conservation Teaching Laboratory
167	pw	121	350 c	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A "hoop" exc at Woodhall in 1997 SF 569 Lab No. 713	Conservation record and picture from Durham University's Conservation Teaching Laboratory
168	pw	121	350 c	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A "stud" exc at Woodhall in 1997 SF 20 Lab No. 714	Conservation record and picture from Durham University's Conservation Teaching Laboratory
169	pw	121	350 c	e	fa	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A brooch Lab No. 715	Conservation record and picture from Durham University's Conservation Teaching Laboratory
170	pw	121	350 c	e	f	Cu	edpre	sb	1	1	1	1	1 c	2 pieces od Cu/A sheeting exc at Woodhall in 1997 SF 698 Lab No. 716	Conservation record and picture from Durham University's Conservation Teaching Laboratory
171	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin (?) exc at South Bridge Abutment in 1972 SF 882 Lab No. 733	Conservation record and picture from Durham University's Conservation Teaching Laboratory
172	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at South Bride Abutment in 1971 SF 268 Lab No. 734	Conservation record and picture from Durham University's Conservation Teaching Laboratory
173	pw	121	395 c	e	cf	Cu,Sn	edpre	sb	2	2	1	1	1 c	Cu/A (bronze?) Romano-British coin exc at South Bridge Abutment in 1972 SF 662 Lab No. 735	Conservation record and picture from Durham University's Conservation Teaching Laboratory
174	w	121	395 c	e	cf	Cu,Sn	edpre	sb	2	1	1	1	1 c	Cu/A Romano-British coin exc at South Bridge Abutment in 1972 SF 760 Lab No. 736	Conservation record from Durham University's Conservation Teaching Laboratory
175	w	121	395 c	e	cf	Cu,Sn	edpre	sb	2	1	1	1	1 c	Cu/A Romano-British coin exc at South Bridge Abutment in 1972 SF 647 Lab No. 737	Conservation record from Durham University's Conservation Teaching Laboratory
176	pw	121	395 c	e	cf	Cu,Sn	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at South Bridge Abutment in 1972 SF 872 Lab No. 738	Conservation record and picture from Durham University's Conservation Teaching Laboratory
177	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at South Bridge Abutment in 1971 SF 256 Lab No. 739	Conservation record and picture from Durham University's Conservation Teaching Laboratory
178	pw	121	395 c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at KF74 in 1974 SF 26 Lab No. 740	Conservation record and picture from Durham University's Conservation Teaching Laboratory
179	pw	121	395 c	e	cf	Cu,Sn	mdpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin exc at Piersbridge Sreet SF 86 Lab No. 741	Conservation record and picture from Durham University's Conservation Teaching Laboratory
180	pw	121	110 o	e	f	Cu,Sn,Wo,Tx,Lh	sdpre	sb	1	2	2	2	1 c	Replica Egyptian adze from the Oriental Museum Lab No. 821	Conservation record and picture from Durham University's Conservation Teaching Laboratory
181	pw	121	620 c	e	f	Cu	edpre	sb	1	2	1	1	1 c	Small Cu/A pierced plate exc Kush in 1997 Lab No. 925	Conservation record and picture from Durham University's Conservation Teaching Laboratory

182	pw	121	620	c	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A loop exc Kush in 1995 SF 50 Lab No. 926	Conservation record and picture from Durham University's Conservation Teaching Laboratory
183	pw	121	620	c	e	fa	Cu	edpre	sb	1	2	1	1	2 c	Stamped (decorated) Cu/A strips exc at Kush in 1996 SF 166 Lab No. 927	Conservation record and picture from Durham University's Conservation Teaching Laboratory
184	pw	121	350	o	e	cf	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A coin from PJC's swag bag Lab No. 951	Conservation record and picture from Durham University's Conservation Teaching Laboratory
185	pw	121	110	o	e	cf	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A coin (prob fake made to appear Roman) from PJC's swag bag Lab No. 952	Conservation record and picture from Durham University's Conservation Teaching Laboratory
186	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 514 Lab No. 390	Conservation record and picture from Durham University's Conservation Teaching Laboratory
187	pw	121	395	c	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A strip of metal with disc-like terminus exc at Hayton in 1995 SF 508 Lab No. 389	Conservation record and picture from Durham University's Conservation Teaching Laboratory
188	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 837 Lab No. 388	Conservation record and picture from Durham University's Conservation Teaching Laboratory
189	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 1199 Lab No. 387	Conservation record and picture from Durham University's Conservation Teaching Laboratory
190	pw	121	395	c	e	cf	Cu	edpre	sb	2	1	1	1	1 c	Cu/A Romano-British coin (apparently featureless) exc at Hayton in 1995 SF 545 Lab No. 386	Conservation record and picture from Durham University's Conservation Teaching Laboratory
191	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 1119 Lab No. 385	Conservation record and picture from Durham University's Conservation Teaching Laboratory
192	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 807 Lab No. 384	Conservation record and picture from Durham University's Conservation Teaching Laboratory
193	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 632 Lab No.383	Conservation record and picture from Durham University's Conservation Teaching Laboratory
194	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 510 Lab No. 382	Conservation record and picture from Durham University's Conservation Teaching Laboratory
195	pw	121	350	o	e	af	Cu,Gl,Pb,Sn,Zn	edpre	sb	2	2	1	1	1 c	Cu/A brooch with glass inlay from DUMA 1984:30 Lab No. 166	Conservation record and picture from Durham University's Conservation Teaching Laboratory
196	pw	121	395	o	e	fa	Cu,Pb,Sn,Zn	edpre	sb	2	2	1	1	1 c	Cu/A pin exc at BAR4 from the Fulling Mill Lab No. 165	Conservation record and picture from Durham University's Conservation Teaching Laboratory
197	pw	121	350	o	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A stud acc DUMAS 1984:30 bag 2 Lab No. 162	Conservation record and picture from Durham University's Conservation Teaching Laboratory
198	pw	121	395	c	e	fa	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A jewellery bauble (?) exc at NEL63 Lab No. 160	Conservation record and picture from Durham University's Conservation Teaching Laboratory
199	pw	121	395	o	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A horse-shaped frag (Durham Uni teaching collection) Lab No. 156	Conservation record and picture from Durham University's Conservation Teaching Laboratory
200	pw	121	350	o	e	fc	Cu	edpre	sb	1	2	1	1	1 c	Cu/A Medieval spoon exc NEL64 acc DUMA 1986:7 from the Fulling Mill Lab No. 152	Conservation record and picture from Durham University's Conservation Teaching Laboratory
201	pw	121	395	o	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A pierced plate exc at Housesteads Lab No. 161	Conservation record and picture from Durham University's Conservation Teaching Laboratory
202	pw	121	395	o	e	cf	Cu	edpre/sdp	sb	1	2	1	1	1 c	Cu/A Romano-British coin exc at CAR 66 OFM acc DUMA 1986:7 from the Fulling Mill Lab No. 151	Conservation record and picture from Durham University's Conservation Teaching Laboratory
203	pw	121	350	o	e	af	Cu	edpre	sb	1	2	1	1	1 c	Cu/A decorative attachment exc at NWL-63 LT acc DUMA 1986-7 from the Fulling Mill Lab No. 146	Conservation record and picture from Durham University's Conservation Teaching Laboratory
204	pw	121	375	o	e	fa	Cu,Sn,Pb,Au, Fe	mdpre	sb	2	2	1	1	1 c	Cu/A fibula brooch (perhaps gilded) acc 1984:1963 from the Fulling Mill Lab No. 145	Conservation record and picture from Durham University's Conservation Teaching Laboratory
205	pw	121	350	o	e	f	Cu,Sn,Zn,Pb	edpre	sb	2	2	1	1	1 c	Cu/A pin/needle exc at NEL 63 LD acc DUMA 1986:7 from the Fulling Mill Lab No. 144	Conservation record and picture from Durham University's Conservation Teaching Laboratory
206	pw	121	350	o	e	fa	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A strap & buckle with remnants of textile attached exc at NEL 61-4 acc DUMA 1986:7 from the Fulling Mill Lab No. 143	Conservation record and picture from Durham University's Conservation Teaching Laboratory
207	pw	121	350	c	e	fa	Cu,Sn,Pb	edpre	sb	2	2	1	1	1 c	CU/A (leaded bronze) brooch Lab No. Lab No. 142	Conservation record and picture from Durham University's Conservation Teaching Laboratory
208	pw	121	140	o	c	fc	Cu,Pb,Sn,Ag,Zn	edpre	sb	2	2	1	1	1 c	Cu/A Etruscan urn pastiche Lab No. 525	Conservation record and picture from Durham University's Conservation Teaching Laboratory
209	pw	121	650	o	cp	fa	Fe,Cu,Bo, Lh	mdpre	sb	2	2	1	1	1 c	Cu/A Arabic dagger with scabbard & ivory & horn handle acc D59 E27 from Oriental Museum Lab No. missing	Conservation record and picture from Durham University's Conservation Teaching Laboratory
210	w	121	350	o	e	cf	Cu	edpre	sb	1	1	1	1	1 c	Cu/A coin exc at NEL-63 LT (bag 44) acc DUMA 1986-7 from the Fulling Mill Lab No. 147	Conservation record and picture from Durham University's Conservation Teaching Laboratory
211	pw	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1 c	CU/A pin exc at NEL 63 NC 21 (bag 49) acc DUMA 1986:7 from the Fulling Mill Lab No. 148	Conservation record and picture from Durham University's Conservation Teaching Laboratory
212	pw	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1 c	Cu/A lace tag exc at NEL 63 KL acc DUMA 1986 from the Fulling Mill Lab No. 149	Conservation record and picture from Durham University's Conservation Teaching Laboratory
213	pw	121	350	o	e	f	Cu,Tx	mdpre	sb	1	1	1	1	1 c	Cu/A lace tag & textile fragment exc at BPK 83 SF 530 Lab No. 150	Conservation record and picture from Durham University's Conservation Teaching Laboratory
214	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	3 frags of window glass wxc at Woodhall in 1997 Lab No. 976	Conservation record and picture from Durham University's Conservation Teaching Laboratory
215	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	4 frags of glass (vessel, assorted) exc at Woodhall in 1997 SF 3242 Lab No. 979	Conservation record and picture from Durham University's Conservation Teaching Laboratory
216	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	Many sherds of waterlogged window glass exc at Woodhall in 1997 SF 3272 Lab No.981	Conservation record and picture from Durham University's Conservation Teaching Laboratory
217	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	Sherds of vessel glass exc at Woodhall Lab No. 978	Conservation record and picture from Durham University's Conservation Teaching Laboratory
218	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	2 sherds of vessel glass exc at Woodhall in 1997 Lab No. 990	Conservation record and picture from Durham University's Conservation Teaching Laboratory
219	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	2 sherds of window glass exc at Woodhall in 1997 lab No. 989	Conservation record and picture from Durham University's Conservation Teaching Laboratory
220	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	2 sherds of vessel glass exc at Woodhall in 1997 Lab No 988	Conservation record and picture from Durham University's Conservation Teaching Laboratory
221	pw	121	350	c	e	f	Gl	edprre	sb	1	2	1	1	2 c	42 sherds of waterlogged vessel glass exc at Woodhall in 1997 Lab No. 983	Conservation record and picture from Durham University's Conservation Teaching Laboratory
222	pw	121	628	o	e	fa	Gl	mdpre	sb	1	2	1	2	1 c	Egyptian glass earring made from B&W glass twisted together Lab No. 818	Conservation record and picture from Durham University's Conservation Teaching Laboratory
223	pw	121	140	o	p	fa	Gl	edpre	sb	1	2	2	2	1 c	18th century glass from Mr Caple Lab No. 680	Conservation record and picture from Durham University's Conservation Teaching Laboratory
224	pw	121	375	o	e	fa	Cl	edpre	sb	2	2	1	1	1 c	78 frags of coloured window glass from Jarrow Lab No. 668	Conservation record and picture from Durham University's Conservation Teaching Laboratory
225	pw	121	350	c	e	fa	Gl,Cu	mdpre	sb	2	2	1	1	2 c	Glass bead or button attched to metal plate & loop (for attchment), incised exc at Woodhall in 1990 SF 9 Lab No. 642	Conservation record and picture from Durham University's Conservation Teaching Laboratory
226	pw	121	350	c	e	fa	Gl,lp	edpre	sb	1	2	1	1	2 c	8 sherds of waterlogged painted glass exc at Bear Park SF 570 Lab No. 636	Conservation record and picture from Durham University's Conservation Teaching Laboratory
227	pw	121	350	c	e	fa	Gl,lp	edpre	sb	1	2	1	1	2 c	8 sherds of waterlogged painted glass exc at Bear Park SF 570 Lab No. 634	Conservation record and picture from Durham University's Conservation Teaching Laboratory

228	pw	121	350	c	e	fa	Gl,Ip	edpre	sb	1	2	1	1	1 c	7 sherds of waterlogged painted glass exc at Bear Park SF 570 Lab No. 629	Conservation record and picture from Durham University's Conservation Teaching Laboratory
229	pw	121	350	c	e	fa	Gl,Ip	edpre	sb	1	2	1	1	2 c	7 sherds of waterlogged painted glass exc at Bear Park SF 570 Lab No. 633	Conservation record and picture from Durham University's Conservation Teaching Laboratory
230	pw	121	350	c	e	fa	Gl,Ip	edpre	sb	1	2	1	1	2 c	8 sherds of waterlogged painted glass exc at Bear Park SF 570 Lab No. 628	Conservation record and picture from Durham University's Conservation Teaching Laboratory
231	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	1 sherd of window glass exc at Woodhall in 1997 Lab No. 517	Conservation record and picture from Durham University's Conservation Teaching Laboratory
232	pw	121	180	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of vessel glass (mixed) exc at Woodhall in 1997 Lab No. 516	Conservation record and picture from Durham University's Conservation Teaching Laboratory
233	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	10 frags of vessel glass esc at Woodhall in 1997 Lab No. 515	Conservation record and picture from Durham University's Conservation Teaching Laboratory
234	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	58 sherds of window & vessel glass exc at Woodhall in 1997 Lab No. 514	Conservation record and picture from Durham University's Conservation Teaching Laboratory
235	w	121	350	c	e	f	Gl	edpre	sb	1	1	1	1	1 c	93 sherds of waterlogged window glass exc at Woodhall in 1997 Lab No. 513	Conservation record and picture from Durham University's Conservation Teaching Laboratory
236	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	14 sherds of vessel glass exc at Woodhall in 1997 Lab No. 512	Conservation record and picture from Durham University's Conservation Teaching Laboratory
237	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	110 sherds of waterlogged vessel glass exc at Woodhall in 1997 Lab No. 510	Conservation record and picture from Durham University's Conservation Teaching Laboratory
238	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of waterlogged window glass exc at Woodhall in 1997 Lab No. 509	Conservation record and picture from Durham University's Conservation Teaching Laboratory
239	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	40 sherds of mixed vessel glass exc at Woodhall in 1997 Lab No. 508	Conservation record and picture from Durham University's Conservation Teaching Laboratory
240	pw	121	350	c	e	f	Gl	edpre	sb	1	1	1	1	1 c	Sherds of window glass exc at Woodhall in 1997 Lab No. 507	Conservation record and picture from Durham University's Conservation Teaching Laboratory
241	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	7 sherds of glass making up part of a vessel base or lid exc at Woodhall in 1997 Lab No. 506	Conservation record and picture from Durham University's Conservation Teaching Laboratory
242	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	59 sherds of window glass exc at Woodhall in 1997 Lab No. 505	Conservation record and picture from Durham University's Conservation Teaching Laboratory
243	pw	121	350	c	e	fa	Gl,Ip	edpre	sb	1	2	1	1	1 c	Bags of waterlogged window glass sherds (some painted) exc at Woodhall in 1994 Lab No. 504 A	Conservation record and picture from Durham University's Conservation Teaching Laboratory
244	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	92 sherds of window glass exc at Woodhall in 1997 Lab No. 503	Conservation record and picture from Durham University's Conservation Teaching Laboratory
245	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of waterlogged window glass frags exc at Woodhall in 1997 Lab No. 502	Conservation record and picture from Durham University's Conservation Teaching Laboratory
246	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of dry window glass exc at Woodhall in 1997 Lab No. 500	Conservation record and picture from Durham University's Conservation Teaching Laboratory
247	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	4 sherds of vessel glass exc at Woodhall in 1997 SF 634 Lab No. 499	Conservation record and picture from Durham University's Conservation Teaching Laboratory
248	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	3 sherds of vessel glass exc at Woodhall in 1997 Lab No. 498	Conservation record and picture from Durham University's Conservation Teaching Laboratory
249	pw	121	350	c	e	fa	Gl	edpre	sb	1	2	1	1	1 c	Sherds of waterlogged glass exc Woodhall in 1997 Lab No. 497	Conservation record and picture from Durham University's Conservation Teaching Laboratory
250	w	121	350	c	e	f	Gl	edpre	sb	1	1	1	1	1 c	60 sherds of waterlogged window glass exc at Woodhhall in 1997 Lab No. 496	Conservation record from Durham University's Conservation Teaching Laboratory
251	pw	121	180	c	e	rf	Gl	edpre	sb	1	2	1	1	1 c	Assorted sherds of vessel glass exc at Woodhall in 1997 Lab No. 494	Conservation record and picture from Durham University's Conservation Teaching Laboratory
252	pw	121	180	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Assorted sherds of vessel glass frags exc at Woodhall in 1997 Lab No. 493	Conservation record and picture from Durham University's Conservation Teaching Laboratory
253	pw	121	628	o	e	ac	Cu,St,Ip	edpre	sb	2	2	1	1	2 c	Cu/A statuette of Pharoh or deity Lab No. 533	Conservation record and picture from Durham University's Conservation Teaching Laboratory
254	pw	121	350	c	e	f	Cu,Zn,Pb,Fe	edpre	sb	2	2	1	1	1 c	Cu/A thimble with Fe tip exc at Woodhall in 1997 SF 631 Lab No. 444	Conservation record and picture from Durham University's Conservation Teaching Laboratory
255	pw	121	350	c	e	fa	Cu	mdpre	sb	2	2	1	1	1 c	CU/A ring exc at Woodhall in 1997 SF 675 Lab No. 443	Conservation record and picture from Durham University's Conservation Teaching Laboratory
256	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A pin/bar exc at Woodhall moated manor in 1997 SF 627 Lab No. 440	Conservation record and picture from Durham University's Conservation Teaching Laboratory
257	pw	121	350	c	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A "spectacle" type buckle exc at Woodhall in 1997 662 Lab No. 441	Conservation record and picture from Durham University's Conservation Teaching Laboratory
258	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 689 Lab No. 409	Conservation record and picture from Durham University's Conservation Teaching Laboratory
259	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 964 Lab No. 408	Conservation record and picture from Durham University's Conservation Teaching Laboratory
260	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin esc at Hayton in 1995 SF 733 Lab No. 407	Conservation record and picture from Durham University's Conservation Teaching Laboratory
261	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 1216 Lab No. 404	Conservation record and picture from Durham University's Conservation Teaching Laboratory
262	pw	121	395	c	e	fc	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A ring exc at Hayton in 1995 SF 633 Lab No. 403	Conservation record and picture from Durham University's Conservation Teaching Laboratory
263	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 574 Lab No. 402	Conservation record and picture from Durham University's Conservation Teaching Laboratory
264	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 965 Lab No. 401	Conservation record and picture from Durham University's Conservation Teaching Laboratory
265	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 855 Lab No. 400	Conservation record and picture from Durham University's Conservation Teaching Laboratory
266	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 942 Lab No. 399	Conservation record and picture from Durham University's Conservation Teaching Laboratory
267	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 851 Lab No. 398	Conservation record and picture from Durham University's Conservation Teaching Laboratory
268	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A phallus exc at Hayton in 1995 SF 697 Lab No. 396	Conservation record and picture from Durham University's Conservation Teaching Laboratory
269	pw	121	395	c	e	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 495 Lab No. 394	Conservation record and picture from Durham University's Conservation Teaching Laboratory
270	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 963 Lab No. 393	Conservation record and picture from Durham University's Conservation Teaching Laboratory
271	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 783 Lab No. 392	Conservation record and picture from Durham University's Conservation Teaching Laboratory
272	pw	121	395	c	e	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Hayton in 1995 SF 511 Lab No. 391	Conservation record and picture from Durham University's Conservation Teaching Laboratory
273	pw	121	180	c	e	f	Gl	edpre	sb	2	2	1	1	1 c	Assorted sherds of vessel glass from at least 3 bottles & some window glass exc at Woodhall in 1997 Lab No. 492	Conservation record and picture from Durham University's Conservation Teaching Laboratory

274	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	54 sherds of window glass exc at Woodhall in 1997 Lab No. 491	Conservation record and picture from Durham University's Conservation Teaching Laboratory
275	pw	121	180	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	21 sherds of mainly vessel glass exc at Woodhall in 1997 Lab No. 488	Conservation record and picture from Durham University's Conservation Teaching Laboratory
276	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of waterlogged window glass exc at Woodhall in 1994 Lab No. 490	Conservation record and picture from Durham University's Conservation Teaching Laboratory
277	pw	121	395	o	e	f	Gl	edpre	sb	1	1	1	1	1 c	2 sherds of ribbed Roman glass Lab No. 473	Conservation record and picture from Durham University's Conservation Teaching Laboratory
278	pw	121	350	c	e	f	Fe	edpre	sb	2	1	1	1	1 c	Fe latch or spur exc at Woodhall in 1997 Lab No. 450	Conservation record and picture from Durham University's Conservation Teaching Laboratory
279	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	26 sherds of waterlogged glass exc at Woodhall in 1994 Lab No. 312 & 313	Conservation record and picture from Durham University's Conservation Teaching Laboratory
280	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	1 c	4 sherds of window glass exc at Woodhall in 1994 Lab No. 311	Conservation record and picture from Durham University's Conservation Teaching Laboratory
281	pw	121	350	c	e	f	Gl	edpre	sb	1	2	1	1	2 c	Frags of glass jug / bottle exc at Woodhall in 1994 Lab No. 297	Conservation record and picture from Durham University's Conservation Teaching Laboratory
282	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	2	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1065	Conservation record and picture from Durham University's Conservation Teaching Laboratory
283	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	1	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1066	Conservation record and picture from Durham University's Conservation Teaching Laboratory
284	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	1	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1062	Conservation record and picture from Durham University's Conservation Teaching Laboratory
285	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	1	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1068	Conservation record and picture from Durham University's Conservation Teaching Laboratory
286	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	1	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1069	Conservation record and picture from Durham University's Conservation Teaching Laboratory
287	pw	121	395	c	ec	fc	Cu	edpre	sb	1	2	1	1	1 c	Cu/A pin exc at Nettleton in 2000 Lab No. 1051	Conservation record and picture from Durham University's Conservation Teaching Laboratory
288	pw	121	395	c	e	f	Fe	edpre	sb	1	2	1	1	1 c	Fe ring exc at Nettleton in 2000 Lab No. 1040	Conservation record and picture from Durham University's Conservation Teaching Laboratory
289	pw	121	395	c	e	f	Fe	edpre	sb	1	2	1	1	1 c	Corroded Fe nail exc at Nettleton in 2000 Lab No. missing	Conservation record and picture from Durham University's Conservation Teaching Laboratory
290	pw	121	395	c	e	f	Cu	edpre	sb	1	2	1	1	1 c	Frag of Cu/A poss associated with a pin exc at Nettleton in 2000 Lab No. 1035	Conservation record and picture from Durham University's Conservation Teaching Laboratory
291	pw	121	395	c	e	f	Cu	edpre	sb	1	2	1	1	1 c	Frag of Cu/A sheeting poss associated with a pin exc at Nettleton in 2000 Lab No. 1036	Conservation record and picture from Durham University's Conservation Teaching Laboratory
292	pw	121	395	c	ec	cf	Cu	edpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1060	Conservation record and picture from Durham University's Conservation Teaching Laboratory
293	pw	121	395	c	ec	cf	Cu	edpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1055	Conservation record and picture from Durham University's Conservation Teaching Laboratory
294	pw	121	395	c	ec	cf	Cu	edpre	sb	1	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1056	Conservation record and picture from Durham University's Conservation Teaching Laboratory
295	pw	121	395	c	ec	fc	Cu	edpre	sb	1	2	1	1	1 c	Cu/A buckle pin exc at Redcliff in 1986 Lab No. 1037	Conservation record and picture from Durham University's Conservation Teaching Laboratory
296	pw	121	395	c	ec	fc	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A "duck" fitting exc at Redcliff in 1986 Lab No. 1028	Conservation record and picture from Durham University's Conservation Teaching Laboratory
297	pw	121	395	c	ec	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1051	Conservation record and picture from Durham University's Conservation Teaching Laboratory
298	pw	121	395	c	ec	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 1999 Lab No. 1052	Conservation record and picture from Durham University's Conservation Teaching Laboratory
299	pw	121	395	c	ec	cf	Cu	edpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1061	Conservation record and picture from Durham University's Conservation Teaching Laboratory
300	pw	121	395	c	ec	cf	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A Romano-British coin exc at Nettleton in 2000 Lab No. 1063	Conservation record and picture from Durham University's Conservation Teaching Laboratory
301	pw	121	395	c	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe bar exc at Nettleton in 2000 Lab No. 1042	Conservation record and picture from Durham University's Conservation Teaching Laboratory
302	pw	121	395	c	e	f	Fe	mdpre	sb	2	2	1	1	1 c	Fe nail exc at Nettleton in 2000 Lab No. 1046	Conservation record and picture from Durham University's Conservation Teaching Laboratory
303	pw	121	620	o	ec	fc	Fe	edpre	sb	2	2	1	1	1 c	Fe arrowhead exc at Lachish from Oriental Museum Lab No. 1125	Conservation record and picture from Durham University's Conservation Teaching Laboratory
304	pw	121	620	o	ec	fc	Fe	edpre	sb	2	2	1	1	1 c	Fe arrowhead exc at Lachish from 1932.8 Wellcome Expedition from Oriental Museum Lab No. 1127	Conservation record and picture from Durham University's Conservation Teaching Laboratory
305	pw	121	350	c	ec	fc	Fe	edpre	sb	1	2	1	1	1 c	Fe spur exc at Hirsel Lab No. 1024	Conservation record and picture from Durham University's Conservation Teaching Laboratory
306	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1088	Conservation record and picture from Durham University's Conservation Teaching Laboratory
307	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1089	Conservation record and picture from Durham University's Conservation Teaching Laboratory
308	pw	121	362	c	ec	fa	GL,lp	edpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1090	Conservation record and picture from Durham University's Conservation Teaching Laboratory
309	pw	121	362	c	ec	fa	Gl,lp	edpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1091	Conservation record and picture from Durham University's Conservation Teaching Laboratory
310	pw	121	362	c	ec	fa	Pb,Gl,lp	edpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass surrounded by lead cames from Rievaulx Abbey Lab No. 1092	Conservation record and picture from Durham University's Conservation Teaching Laboratory
311	pw	121	362	c	ec	fa	Gl,lp	mdpre	sb	1	2	1	1	1 c	Frag of painted coloured window glass from Rievaulx Abbey Lab No. 1093	Conservation record and picture from Durham University's Conservation Teaching Laboratory
312	pw	121	350	c	ec	fa	Gl	edpre	sb	1	2	1	1	1 c	Frag of coloured window glass from Durham Leazes Bowl exc in 1996 Lab No. 1095	Conservation record and picture from Durham University's Conservation Teaching Laboratory
313	pw	121	350	c	ec	fa	Gl	edpre	sb	1	2	1	1	1 c	Frag of coloured window glass from Durham Leazes Bowl exc in 1996 Lab No. 1096	Conservation record and picture from Durham University's Conservation Teaching Laboratory
314	pw	121	180	c	e	fc	Wo,Cu	edpre	sb	1	2	1	1	1 c	Frags of coffin lid with Cu/A tacks exc from Hanging Ditch, Manchester Lab No. 1142	Conservation record and picture from Durham University's Conservation Teaching Laboratory
315	pw	121	628	o	ec	ca	St,Cu,lp	edpre/sdp	sb	2	2	1	2	2 c	Limestone statuette of Eguptian deity with Cu/A headdress & traces of pigment from Oriental Museum Lab No. 1136	Conservation record and picture from Durham University's Conservation Teaching Laboratory
316	pw	121	191	o	pe	fc	Wo,Tx,Ce	mdpre	sb	2	2	1	1	1 c	Wooden footstool with marquetry inlay, ceramic feet & wool & silk embroidered cushion fro Beamish Museum Lab No. 1148	Conservation record and picture from Durham University's Conservation Teaching Laboratory
317	pw	121	395	c	e	f	Lh	edpre	sb	1	2	2	1	1 c	Frags of waterlogged leather shoe parts (incl sole) exc from Carlisle in 1989 Lab No. 1113	Conservation record and picture from Durham University's Conservation Teaching Laboratory
318	pw	121	350	c	e	f	Ce	edpre	sb	1	2	1	1	1 c	Broken Medieval ceramic vessel Lab No. 483	Conservation record and picture from Durham University's Conservation Teaching Laboratory
319	pw	121	395	o	ec	f	Ce	edpre	sb	1	2	1	1	1 c	Frags of ceramic vessel from Housesteads Museum Lab No. 484	Conservation record and picture from Durham University's Conservation Teaching Laboratory

320	pw	121	350	o	e	f	Ce,Ve	edpre	sb	1	2	1	1	1 c	Frags of ceramic vessel exc at ULX in 1965 Lab No. 485	Conservation record and picture from Durham University's Conservation Teaching Laboratory
321	pw	121	430	o	e	f	Ce	edpre	sb	1	2	1	1	1 c	Frags of broken ceramic bowl with orange body and black stripe (poss Ancient Greek) from Oriental Museum Lab No. missing	Conservation record and picture from Durham University's Conservation Teaching Laboratory
322	pw	121	140	o	pe	ac	Ce,lp, Gl,St	edpre/sdp	sb	1	2	1	2	1 c	19th century ceramic copy of Ancient Egyptian cat statuette acc R.187/1942 C. Mg. Broken and restored on a previous occasion from Oriental Museum Lab No. 519	Conservation record and picture from Durham University's Conservation Teaching Laboratory
323	pw	121	685	o	ec	ca	Wo,Fr,Lq	mdpre	sb	2	2	2	2	1 c	Lacquered wooden demon statuette (poss Indian origin) acc 1977/82 from Oriental Museum Lab No. 530	Conservation record and picture from Durham University's Conservation Teaching Laboratory
324	pw	121	628	o	ec	ca	St,Gl,lp	edpre/sdp	sb	2	2	2	1	2 c	Egyptian mummy mask made from plaster, glass, gesso & pigment acc 1971-183 + 1933.296 from Oriental Museum Lab No. 534	Conservation record and picture from Durham University's Conservation Teaching Laboratory
325	pw	121	628	o	ec	ca	Ce,lp	edpre	sb	1	2	1	2	2 c	Painted Egyptian ceramic plaque (low fired & porous) from Oriental Museum Lab No. 539	Conservation record and picture from Durham University's Conservation Teaching Laboratory
326	pw	121	742	o	ec	fa	Ce,Ve	mdpre	sb	1	2	2	2	1 c	"Greenware" Chinese lion dog incense holder Xing Dynasty from Oriental Museum Lab No. 652	Conservation record and picture from Durham University's Conservation Teaching Laboratory
327	pw	121	180	c	e	fc	Ce,Ve	edpre	sb	2	2	2	1	1 c	Frag of glazed "cockeral" bowl in Metropolitan ware (17thC) exc at Chorister School, Durham Lab No. 660	Conservation record and picture from Durham University's Conservation Teaching Laboratory
328	pw	121	180	c	ec	c	Ce	edpre	sb	2	2	1	1	1 c	Pipe clay figurine exc at Penllyn in late 1990s Lab No. 679	Conservation record and picture from Durham University's Conservation Teaching Laboratory
329	pw	121	180	c	pe	f	Ce,Ve	edpre	sb	1	2	2	2	1 c	Broken ceramic flpwer or chamber pot with glazed decoration Lab No. 684	Conservation record and picture from Durham University's Conservation Teaching Laboratory
330	pw	121	180	c	pe	f	Ce,Ve	edpre	sb	1	2	1	2	1 c	Broken glazed bowl Lab No. missing	Conservation record and picture from Durham University's Conservation Teaching Laboratory
331	pw	121	520	c	e	f	Ce	edpre	sb	1	2	2	1	1 c	Bronze Age ceramic pot exc at Ramsey Church Knowe 1983 Lab No. 742	Conservation record and picture from Durham University's Conservation Teaching Laboratory
332	pw	121	520	c	ec	f	Ce	edpre	sb	1	2	1	2	1 c	Bronze Age low-fired ceramic food vessel exc at Ingram in 1996 Lab No. 743	Conservation record and picture from Durham University's Conservation Teaching Laboratory
333	pw	121	510	o	e	f	Ce	edpre	sb	1	2	2	1	1 c	Iron Age broken pottery dish exc at Holme Spaldding Moor acc 418.1983 Hullmus.ref from Fulling Mill Lab No. 744	Conservation record and picture from Durham University's Conservation Teaching Laboratory
334	pw	121	350	c	e	f	Ce,Ve	edpre	sb	1	2	2	1	1 c	Ceramic vessel with handle(?) and green glaze exc at Bearpark in 1982 Lab No. 745	Conservation record and picture from Durham University's Conservation Teaching Laboratory
335	pw	121	430	o	ap	fa	Ce	edpre	sb	1	2	1	2	1 c	Greek ceramic "pithos" vessel (v little info) Lab No. 746	Conservation record and picture from Durham University's Conservation Teaching Laboratory
336	pw	121	350	c	e	f	Ce	edpre	sb	1	1	1	1	1 c	Ceramic vessel (broken) exc at Durham Leazes Bowl in 1996 Lab No. 747	Conservation record from Durham University's Conservation Teaching Laboratory
337	pw	121	110	c	e	f	Ce	edpre	sb	1	1	1	1	1 c	Selection of pit sherds from a number of vessels - only 2 joining frags Lab No. 748	Conservation record from Durham University's Conservation Teaching Laboratory
338	w	121	0	c	e	f	Ce	edpre	sb	1	1	1	1	1 c	Ceramic vessel exc from Hinedon Edge in 1997 (insufficient info) Lab No. 766	Conservation record from Durham University's Conservation Teaching Laboratory
339	pw	121	625	o	pe	fc	Ce	edpre	sb	1	2	2	2	1 c	Egyptian ceramic vessel, broken in past and adhered. Broken again. Ancient repair? Lab No. 778	Conservation record and picture from Durham University's Conservation Teaching Laboratory
340	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	mdpre	sb	2	2	2	2	1 c	Chineses lacquered dish with damage to lacquer causing internal textile to be exposed in places. Acc 1970.18 from Oriental Museum Lab No. 793	Conservation record and picture from Durham University's Conservation Teaching Laboratory
341	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	sdpre	sb	2	2	2	2	1 c	Q'ing Dynasty Chinese lacquer dish (late 17thC - early 18th C) acc 1970.18 from Oriental Museum Lab No. 795	Conservation record and picture from Durham University's Conservation Teaching Laboratory
342	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	mdpre	sb	2	2	2	2	1 c	Chinese lacquered dish with mother of pearl inlay, gilding & silvering acc 1970.18 from Oriental Museum Lab No. 797	Conservation record and picture from Durham University's Conservation Teaching Laboratory
343	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	mdpre	sb	2	2	2	2	1 c	Chinese lacquered dish with mother of pearl inlay & gilding acc 1970.18 from Oriental Museum Lab No. 800	Conservation record and picture from Durham University's Conservation Teaching Laboratory
344	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	sdpre	sb	2	2	2	2	1 c	Chinese lacquered dish with mother of pearl inlay & gilding acc 1970.18 from Oriental Museum Lab No. 805	Conservation record and picture from Durham University's Conservation Teaching Laboratory
345	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	sdpre	sb	2	2	2	2	1 c	Chinese lacquered dish with mother of pearl inlay & gilding (& poss silvering) acc 1970.18 G from Oriental Museum Lab No. 806	Conservation record and picture from Durham University's Conservation Teaching Laboratory
346	pw	121	742	o	ea	fa	Tx,Lq,Bo,Au,Ag	sdpre	sb	2	2	2	1	1 c	Chinese lacquered dish with mother of pearl inlay & gilding acc 1970.18 A from Oriental Museum Lab No. 808	Conservation record and picture from Durham University's Conservation Teaching Laboratory
347	pw	121	742	o	ec	fa	Wo,Lq	mdpre	sb	2	2	2	2	1 c	Chinese lacquered wooden picnic box acc 1961.28 from Oriental Museum Lab No. 809	Conservation record and picture from Durham University's Conservation Teaching Laboratory
348	pw	121	742	o	ea	af	Lq	sdpre	sb	2	2	2	2	1 c	Chinese carved lacquer dish decorated with dragon, phoenix and floral motif. Inscription on reverse dates it to 1595-1596 (Western calender) acc 1969.476 from Oriental Museum Lab No. 811	Conservation record and picture from Durham University's Conservation Teaching Laboratory
349	pw	121	350	c	e	a	St,lp	edpre	sb	1	2	1	1	2 c	7 pieces of painted wallplaster exc at Clarendon Palace in 2000 lab No. 985	Conservation record and picture from Durham University's Conservation Teaching Laboratory
350	pw	121	350	c	e	a	St,lp	edpre	sb	1	2	1	1	2 c	Frag of painted wallplaster exc at Clarendon Palace in 2001 Lab No. 1021	Conservation record and picture from Durham University's Conservation Teaching Laboratory
351	pw	121	350	c	e	a	St,lp	edpre	sb	1	2	1	1	2 c	Frag of painted wallplaster exc at Clarendon Palace lab No. 1022	Conservation record and picture from Durham University's Conservation Teaching Laboratory
352	pw	121	350	c	e	a	St,lp	edpre	sb	1	2	1	1	2 c	2 frags of painted wallplaster exc at Claendon Palace in 2000 Lab No. 1002	Conservation record and picture from Durham University's Conservation Teaching Laboratory
353	pw	121	350	c	e	f	Bo	mdpre	sb	1	2	1	1	1 c	Tooth (fish) poss head of dress pin or non-artefact exc at Woodhall on 1997 SF 591 Lab No. 415	Conservation record and picture from Durham University's Conservation Teaching Laboratory
354	pw	121	180	c	e	fc	Bo	sdpre	sb	1	2	2	1	1 c	Horn/antler button exc at Woodhall in 1997 SF 727 Lab No. 417 a	Conservation record and picture from Durham University's Conservation Teaching Laboratory
355	pw	121	180	c	e	fc	Bo	mdpre	sb	1	2	1	1	1 c	Shell button exc at Woodhall in 1997 SF 727 Lab No. 417 b	Conservation record and picture from Durham University's Conservation Teaching Laboratory
356	pw	121	350	c	e	fc	Bo	edpre	sb	1	2	2	1	1 c	Broken bone artfact, poss comb exc at Woodhall in 1997 SF 678 Lab No. 418	Conservation record and picture from Durham University's Conservation Teaching Laboratory
357	pw	121	350	c	e	f	Bo	mdpre	sb	1	2	2	1	1 c	Shaped bone artefact exc at Woodhall in 1997 SF 682 Lab No. 421	Conservation record and picture from Durham University's Conservation Teaching Laboratory
358	pw	121	350	c	e	fc	Bo,Cu	mdpre	sb	1	2	1	1	1 c	Decorated bone button with Cu/A tie exc at Woodhall in 1997 SF 632 Lab No. 422	Conservation record and picture from Durham University's Conservation Teaching Laboratory
359	pw	121	350	c	e	f	Bo	sdpre	sb	1	2	1	1	1 c	Pierced bone artefact exc at Woodhall in 1997 SF 705 Lab No. 424	Conservation record and picture from Durham University's Conservation Teaching Laboratory
360	pw	121	350	c	e	fc	Bo	edpre	sb	1	2	1	1	1 c	Bone knife handle exc at Woodhall in 1997 SF 558 Lab No. 428	Conservation record and picture from Durham University's Conservation Teaching Laboratory
361	pw	121	350	c	ec	f	Bo	sdpre	sb	1	2	1	1	1 c	Bone tuning key exc at Woodhall in 1997 SF 618 Lab No. 435	Conservation record and picture from Durham University's Conservation Teaching Laboratory
362	pw	121	350	c	e	f	Fe,Bo	edpre	sb	2	2	1	1	1 c	Bone-handled Fe knife exc at Woodhall in 1997 SF 579 Lab No. 462	Conservation record and picture from Durham University's Conservation Teaching Laboratory
363	pw	121	350	c	e	f	Bo	edpre	sb	1	2	2	1	1 c	Bone comb (missing many teeth) exc at Keekle High-Wrea 17thC farm house SF 1 Lab No. 601	Conservation record and picture from Durham University's Conservation Teaching Laboratory

364	pw	121	350	c	e	fc	Fe,Bo	edpre	sb	2	2	1	1	1 c	Bone-handled Fe knife exc at Woodhall in 1992 SF 106 Lab No. 602	Conservation record and picture from Durham University's Conservation Teaching Laboratory
365	pw	121	350	c	e	fc	Fe,Bo	edpre	sb	2	2	1	1	1 c	Bone-handled Fe knife exc at Woodhall in 1992 SF 90 Lab No. 603	Conservation record and picture from Durham University's Conservation Teaching Laboratory
366	pw	121	350	c	e	fc	Bo,Fe	edpre	sb	2	2	1	1	1 c	Bone handle of Fe knife exc at Woodhall in 1991 SF 56 Lab No. 606	Conservation record and picture from Durham University's Conservation Teaching Laboratory
367	pw	121	350	o	e	fc	Bo,Fe	edpre	sb	1	2	1	1	2 c	Bone knie handle with traces of Fe tang from Jarrow Museum Lab No. 657	Conservation record and picture from Durham University's Conservation Teaching Laboratory
368	pw	121	350	c	e	f	Bo	edpre	sb	1	2	2	1	1 c	Bone knife (?) handle exc at Woodhall in 1993 SF 186 Lab No. 604	Conservation record and picture from Durham University's Conservation Teaching Laboratory
369	pw	121	350	o	e	fc	Bo,Fe,Cu	edpre/sdp	sb	2	2	1	1	1 c	Horn knife handle with Fe tang & Cu/A disc decoration from Jarrow Museum Lab No. 669	Conservation record and picture from Durham University's Conservation Teaching Laboratory
370	pw	121	350	c	e	fc	Bo,Fe	edpre	sb	2	2	1	1	2 c	Bone knife handle with Fe tang exc at Durham County Claypath site in 1999 Lab No. 777	Conservation record and picture from Durham University's Conservation Teaching Laboratory
371	pw	121	350	c	e	fc	Bo,Fe	edpre	sb	2	2	1	1	2 c	Bone knife handle with Fe tang exc at Durham County Claypath site in 1999 SF Knife 6 Lab No. 787	Conservation record and picture from Durham University's Conservation Teaching Laboratory
372	pw	121	350	c	e	fc	Bo,Fe	edpre	sb	2	2	1	1	1 c	Bone knife handle with Fe tang exc at Durham County Claypath site in 1999 Lab No. 790	Conservation record and picture from Durham University's Conservation Teaching Laboratory
373	pw	121	350	c	e	fc	Bo	edpre	sb	1	2	1	1	1 c	Ivory comb frag exc at Bearpark in 1984 SF 636 Lab No. 454	Conservation record and picture from Durham University's Conservation Teaching Laboratory
374	pw	121	628	o	ec	c	Bo	mdpre	sb	2	2	2	1	1 c	Ivory phallic figurine of man (Ancient Egyptain) acc 3579 from Oriental Museum Lab No. 522	Conservation record and picture from Durham University's Conservation Teaching Laboratory
375	pw	121	628	o	ec	c	Bo,St	edpre	sb	2	2	1	1	1 c	Ivory figurine of man with inlaid (lapis lazuli?) eyes (Ancient Egyptain) from Oriental Museum Lab No. 522 (different to previous object)	Conservation record and picture from Durham University's Conservation Teaching Laboratory
376	pw	121	628	o	ec	c	Bo,Ip	edpre	sb	2	2	2	1	1 c	Ivory figurine of cat with painted black spots from Oriental Museum Lab No 522 (different to previous object)	Conservation record and picture from Durham University's Conservation Teaching Laboratory
377	pw	121	628	o	ec	c	Bo	edpre	sb	2	2	1	1	1 c	Ivory figurine of man - v fragmented through extensive delamination from Oriental Museum Lab No. 522 (different to previous object)	Conservation record and picture from Durham University's Conservation Teaching Laboratory
378	pw	121	350	c	e	fc	Bo	mdpre	sb	2	2	2	1	1 c	Ivory handle exc at Woodhall in 1991 SF 67 Lab No. 608 A	Conservation record and picture from Durham University's Conservation Teaching Laboratory
379	pw	121	350	c	ec	fc	Bo	edpre	sb	1	2	1	1	1 c	Ivory screw head(?) exc at Woodhall in 1991 SF 67 Lab No. 608 B	Conservation record and picture from Durham University's Conservation Teaching Laboratory
380	pw	121	650	o	ec	fc	Fe,Wo,Bo,Lh,Pa	mdpre	sb	2	2	2	1	1 c	Fe dagger with horn handle & leather-bound wooden sheath prob from Bhutan acc E9 from Oriental Museum Lab No. 776	Conservation record and picture from Durham University's Conservation Teaching Laboratory
381	pw	121	742	o	ac	af	Bo	mdpre	sb	1	2	2	1	1 c	Rhino horn carved cup (late Chinese culture) Lab No. 792	Conservation record and picture from Durham University's Conservation Teaching Laboratory
382	opw	121	350	o	e	f	Fe	edpre	sb	1	2	1	1	1 c	Wrought Fe strap end from WPD.00 Lab No. 1018	Conservation record and picture from Durham University's Conservation Teaching Laboratory
383	pw	121	520	o	ec	fc	Ce	edpre	sb	1	2	1	1	1 c	Bronze Age ceramic cinerary urn - v fragmented with pieces missing acc 1956 or 1921 from Newcastel Museum of Antiquities Lab No. 907	Conservation record and picture from Durham University's Conservation Teaching Laboratory
384	pw	121	140	o	ec	fc	Wo,Ce,Tx	sdpre	sb	2	2	1	1	1 c	Wooden coffin lid exc at Hanging Ditch, Manchester in 1997 Lab No. 910	Conservation record and picture from Durham University's Conservation Teaching Laboratory
385	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe horse shoe exc at Woodhall in 1994 Lab No. 826	Conservation record and picture from Durham University's Conservation Teaching Laboratory
386	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Kidney-shaped Fe obj with extensive corrosion & numerous cracks exc at Woodhall Lab No. 832	Conservation record and picture from Durham University's Conservation Teaching Laboratory
387	pw	121	350	0	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe handle exc at Woodhall in 1992 Lab No. 833	Conservation record and picture from Durham University's Conservation Teaching Laboratory
388	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe bar exc at Woodhall in 1992 Lab No. 833 (different to previous object)	Conservation record and picture from Durham University's Conservation Teaching Laboratory
389	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Small Fe bar exc at Woodhall in 1992 Lab No. 833 (different to previous object)	Conservation record and picture from Durham University's Conservation Teaching Laboratory
390	ppr	121	171	o	ce	f	Lh,Wo,Fe	mdpre	sb	1	2	2	2	1 c	Light cavalry, universal pattern saddle thought to be from 1815 Battle of Waterloo. Ordinary trooper's saddle, perhaps only one left	pp. 8-9 "The Waterloo Saddle" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
391	ppr	121	151	o	ca	fc	Lh,Ag,Ip	mdpre	sb	1	2	1	1	2 c	Gilt leather chausuble from 1st half 18thC - prob made in Germany	pp. 10-11 "Gilt leather chausuble" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
392	ppr	121	140	o	c	f	Lh,Tx	mdpre	sb	1	2	2	2	1 c	Leather boots owned by champion jockey F. Buckle, dated c1831	pp. 12-13 "Jockey's saddle and boots" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
393	ppr	121	140	o	c	f	Lh,Tx,Fe	mdpre	sb	1	2	2	2	1 c	Saddle owned by champion jockey F. Buckle, dated 1831 (name & date on saddle)	pp. 12-13 "Jockey's saddle and boots" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
394	ppr	121	140	o	c	f	Lh,Wo,Fe	edpre	sb	1	2	1	2	1 c	Leather suitcase poss to hold records from "the Golf Match Club", dated c 1900	p. 14 "Suitcase" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
395	ppr	121	140	o	ce	fa	Lh,Wo,Fe	mdpre	sb	1	2	1	2	1 c	Wooden-framed python skin chair (glazed)	p. 15 "Python skin chair" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
396	ppr	121	140	o	cf	fc	Lh	mdpre	sb	1	2	1	2	1 c	1906 Renault 14/20 Renault Landaulette (car) needing attention to leather components: seat	p. 16-17 "Renault Landaulette" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
397	ppr	121	140	o	cf	fc	Lh	sdpre	sb	1	2	1	2	1 c	1906 Renault 14/20 Renault Landaulette (car) needing attention to leather interior	p. 16-17 "Renault Landaulette" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
398	ppr	121	140	o	cf	fc	Lh	sdpre	sb	1	2	1	2	1 c	1906 Renault 14/20 Renault Landaulette (car) needing attention to leather components: wings & roof	p. 16-17 "Renault Landaulette" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
399	ppr	121	140	o	ce	fr	Lh,Wo,Ip	mdpre	sb	1	2	1	2	1 c	Leather fire bucket used by Westminster Insurance Company - relates to 1717 foundation of company	p. 18-19 "Fire bucket" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
400	ppr	121	161	o	cf	fa	Lh,Ag,Lq,Ip	mdpre	sb	1	2	1	2	1 c	Gilt leather wall coverings from dining room of Levens Hall (2nd quarter 18thC) - leather coated with silver leaf & painted with yellow varnish	p. 20-21 "Gilt, leather wall coverings" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
401	ppr	121	140	o	c	f	Lh,Wo,Fr,Fe	mdpre	sb	1	2	1	1	1 c	Leather fireside club chair - prob early 20thC	p. 22 "Club chair" in The conservation of leather artefacts: case studies from The Leather Conservation Centre - 2000 - Sturge, T. , The LCC, Northampton
402	pw	121	350	o	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A bodkin exc at Woodhall in 1992 Lab No. 836	Conservation record and picture from Durham University's Conservation Teaching Laboratory
403	pw	121	350	o	e	f	edpre	sdpre	sb	2	2	1	1	1 c	Fe horse shoe exc at Woodhall in 1992 Lab No. 837	Conservation record and picture from Durham University's Conservation Teaching Laboratory
404	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe object exc at Woodhall in 1992 Lab No. 838	Conservation record and picture from Durham University's Conservation Teaching Laboratory
405	pw	121	350	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A pin exc at Woodhall in 1992 Lab No. 846	Conservation record and picture from Durham University's Conservation Teaching Laboratory
406	pw	121	350	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A clasp/fitting exc at Woodhall in 1997 Lab No. 847	Conservation record and picture from Durham University's Conservation Teaching Laboratory
407	pw	121	628	o	ce	cf	Wo,St,Ip,Au	mdpre	sb	2	2	1	1	2 c	Painted wooden tomb bird statue depicting Egyptain god Horus from Oriental Museum Lab No. 854	Conservation record and picture from Durham University's Conservation Teaching Laboratory
408	pw	121	628	o	ce	cf	Wo,St,Ip,Au	mdpre	sb	2	2	1	1	1 c	Painted wooden tomb bird statue depicting Egyptain god Horus from Oriental Museum Lab No. 855	Conservation record and picture from Durham University's Conservation Teaching Laboratory
409	pw	121	628	o	ce	cf	Tx,Ba,Pp	mdpre	sb	2	2	1	1	1 c	Model mummy comprising barley seed, bandages, embalming fluids & wax from Oriental Museum Lab No. 856	Conservation record and picture from Durham University's Conservation Teaching Laboratory

410	pw	121	628	o	ce	cf	Tx,Ba,Pp	mdpre	sb	2	2	1	1	1 c	Model mummy comprising barley seed, bandages & wax from Oriental Museum Lab No. 850	Conservation record and picture from Durham University's Conservation Teaching Laboratory
411	pw	121	628	o	c	f	Ce,Ip	mdpre	sb	1	2	1	1	1 c	Egyptian ceramic vessel from Oriental Museum Lab No. 858	Conservation record and picture from Durham University's Conservation Teaching Laboratory
412	pw	121	600	o	ce	c	Wo,Fe,Ip	mdpre	sb	1	2	1	1	1 c	Wooden mask of undisclosed provenance from Oriernal Museum Lab No. 859	Conservation record and picture from Durham University's Conservation Teaching Laboratory
413	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Waterlogged plank with peg hole & square peg exc at Woodhall in 1992 Lab No. 860	Conservation record and picture from Durham University's Conservation Teaching Laboratory
414	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Waterlooged pegs/sticks exc at Woodhall Lab No. 861	Conservation record and picture from Durham University's Conservation Teaching Laboratory
415	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Piece of waterlogged wood exc at Woodhall in 1992 Lab No. 862	Conservation record and picture from Durham University's Conservation Teaching Laboratory
416	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Frag of waterlogged worked wood exc at Woodhall in 1991 Lab No. 86*	Conservation record and picture from Durham University's Conservation Teaching Laboratory
417	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Frag of waterlogged timber exc at Woodhall in 1996 Lab No. 866	Conservation record and picture from Durham University's Conservation Teaching Laboratory
418	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Waterlogged wooden stake exc at Woodhall in 1991 Lab No. 867	Conservation record and picture from Durham University's Conservation Teaching Laboratory
419	pw	121	350	o	e	f	Lh	mdpre	sb	1	2	1	1	1 c	Waterlogged leather wristband exc at Woodhall in 1994 Lab No. 868	Conservation record and picture from Durham University's Conservation Teaching Laboratory
420	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Waterlogged leather shoe frags exc at Woodhall in 1994 Lab No. 869	Conservation record and picture from Durham University's Conservation Teaching Laboratory
421	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Waterloged leather shoe frags exc at Woodhall in 1994 Lab No. 870	Conservation record and picture from Durham University's Conservation Teaching Laboratory
422	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Waterlogged leather saddle parts, or garment or bag exc at Woodhall Lab No. 871	Conservation record and picture from Durham University's Conservation Teaching Laboratory
423	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Frags of waterlogged leather from diff shoes exc at Woodhall in 1994 Lab No. 872	Conservation record and picture from Durham University's Conservation Teaching Laboratory
424	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Frags of waterlogged leather exc at Woodhall in 1994 Lab No. 873	Conservation record and picture from Durham University's Conservation Teaching Laboratory
425	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Piece of window glass exc at Woodhall in 1997 Lab No. 874	Conservation record and picture from Durham University's Conservation Teaching Laboratory
426	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Frag of window glass exc at Woodhall in 1997 Lab No. 875	Conservation record and picture from Durham University's Conservation Teaching Laboratory
427	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	5 sherds of Medieval glass from Woodhall Lab No. 876	Conservation record and picture from Durham University's Conservation Teaching Laboratory
428	pw	121	350	o	e	f	Pb,Gl	edpre	sb	1	2	1	1	1 c	Pb cames exc from UH00 in 2000 Lab No. 879	Conservation record and picture from Durham University's Conservation Teaching Laboratory
429	pw	121	350	o	e	f	Pb,Gl	edpre	sb	1	2	1	1	1 c	Pb cames with glass exc at Woodhall in 1997 Lab No. 880	Conservation record and picture from Durham University's Conservation Teaching Laboratory
430	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherd of glass exc at Woodhall in 1997 Lab No. 882	Conservation record and picture from Durham University's Conservation Teaching Laboratory
431	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherd of glass exc at Woodhall in 1997 Lab No. 883	Conservation record and picture from Durham University's Conservation Teaching Laboratory
432	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	3 sherds of glass exc at Woodhall in 1997 Lab No. 884	Conservation record and picture from Durham University's Conservation Teaching Laboratory
433	pw	121	350	o	e	f	Pb,Gl	edpre	sb	1	2	1	1	1 c	Pb came & window glass exc at Woodhall in 1997 Lab No. 885	Conservation record and picture from Durham University's Conservation Teaching Laboratory
434	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	1 sherd window glass exc at Woodhall in 1997 Lab No. 887	Conservation record and picture from Durham University's Conservation Teaching Laboratory
435	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	1 sherd window glass exc at Woodhall in 1997 Lab No. 889	Conservation record and picture from Durham University's Conservation Teaching Laboratory
436	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of window glass exc at Woodhall in 1997 Lab No. 890	Conservation record and picture from Durham University's Conservation Teaching Laboratory
437	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	1 sherd window glass exc at Woodhall in 1997 Lab No. 891	Conservation record and picture from Durham University's Conservation Teaching Laboratory
438	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	1 sherd window glass exc at Woodhall in 1997 Lab No. 892	Conservation record and picture from Durham University's Conservation Teaching Laboratory
439	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	2 sherds of window glass exc at Woodhall in 1997 Lab No. 893	Conservation record and picture from Durham University's Conservation Teaching Laboratory
440	pw	121	350	o	e	f	Pb,Gl,St	edpre	sb	1	2	1	1	1 c	Pb cames with attached glass sherds exc at Woodhall in 1997 Lab No. 894	Conservation record and picture from Durham University's Conservation Teaching Laboratory
441	pw	121	350	o	e	f	Pb,St	edpre	sb	1	2	1	1	1 c	Pb cames exc at UH00 in 2000 Lab No. 895	Conservation record and picture from Durham University's Conservation Teaching Laboratory
442	pw	121	620	o	ce	f	Ce,Ve	edpre	sb	1	2	1	2	1 c	Iranian ceramic vessel from V&A Museum Lab No. 896	Conservation record and picture from Durham University's Conservation Teaching Laboratory
443	pw	121	140	o	e	f	Lh,Fe	mdpre/sdp	sb	1	2	1	1	1 c	Nearly complete leather boot exc at Woodhall in 1996. Conserved in Durham soon after exc and again in 2001 Lab No. 901	Conservation record and picture from Durham University's Conservation Teaching Laboratory
444	pw	121	140	c	ce	fr	Lh,Tx,Fe	mdpre/sdp	sb	2	2	1	2	2 c	Woman's leather shoe found in the wall of a house in Co. Durham. Previously conserved and reconserved in 2001 Lab No. 902	Conservation record and picture from Durham University's Conservation Teaching Laboratory
445	pw	121	520	o	e	fc	Ce	edpre	sb	1	2	1	1	1 c	Bronze Age cinerary urn - very framented & incomplete from Newcastle Museum of Antiquities Lab No. 903	Conservation record and picture from Durham University's Conservation Teaching Laboratory
446	pw	121	151	o	ce	fc	Wo,Cu,Tx,Fr	edpre	sb	2	2	1	1	1 c	Frags of 18thC coffin lid with Cu/A tack decoration exc at Hanging Ditch, Manchester Lab No. 906	Conservation record and picture from Durham University's Conservation Teaching Laboratory
447	pw	121	151	o	ce	fc	Wo,Cu,Tx,Bo	edpre	sb	2	2	1	1	1 c	Frags of coffin lid with Cu/A tack decoratation exc from Hanging Ditch, Manchester Lab No. 910	Conservation record and picture from Durham University's Conservation Teaching Laboratory
448	w	121	140	o	e	f	Wo,Fe	edpre	sb	2	1	1	1	1 c	Wooden-handled knife exc at Milenium Hall site, Claypath, Durham City c2000 Lab No. 779	Conservation record from Durham University's Conservation Teaching Laboratory
449	w	121	350	o	e	f	Wo	edpre	sb	1	1	1	1	1 c	Frags of wooden bowl exc at Woodhall in 1996 lab No. 748	Conservation record from Durham University's Conservation Teaching Laboratory
450	pw	121	600	o	ce	fc	Fe,Bo,Lh	mdpre	sb	2	2	1	1	2 c	Fe knife with leather coated sccard & antler handle + smaller knife with antler handle from Oriental Museum Lab No. 786	Conservation record and picture from Durham University's Conservation Teaching Laboratory
451	pw	121	755,735	o	ca	af	Tx,Lq,Bo,Au,Ag	sdpre	sb	2	2	1	2	1 c	Chinese or Japanese lacquer dish from Oriental Museum Lab No. 805	Conservation record and picture from Durham University's Conservation Teaching Laboratory
452	pw	121	735	o	ce	fc	Wo,Ba,St,Ip,Fr	sdpre	sb	2	2	1	1	1 c	Chinese writing set with brushes, ink stones, water pot & pigments. Stickers perhaps indicate late date from, Oriental Museum Lab No. 813	Conservation record and picture from Durham University's Conservation Teaching Laboratory
453	pw	121	191	o	e	f	Wo,Cu,Sn,Bo	mdpre	sb	2	2	1	1	1 c	Wooden tea caddy dating between 1850-1900 from Beamish Museum Lab No. 820	Conservation record and picture from Durham University's Conservation Teaching Laboratory
454	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	9 lumps of Fe in highly corroded state exc at Woodhall in 1994 Lab No. 825	Conservation record and picture from Durham University's Conservation Teaching Laboratory
455	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe horseshoe exc at Woodhall in 1994 Lab No. 826	Conservation record and picture from Durham University's Conservation Teaching Laboratory

456	pw	121	180	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A button (?) exc at Woodhall in 1997 Lab No. 827	Conservation record and picture from Durham University's Conservation Teaching Laboratory
457	pw	121	350	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A coin exc at Woodhall in 1992 Lab No. 828	Conservation record and picture from Durham University's Conservation Teaching Laboratory
458	pw	121	350	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A pin exc at Woodhall in 1997 Lab No. 851	Conservation record and picture from Durham University's Conservation Teaching Laboratory
459	pw	121	140	o	e	fa	Cu	edpre	sb	1	2	1	1	1 c	Cu/A animal-shaped plaque exc at Woodhall in 1992 Lab No. 852	Conservation record and picture from Durham University's Conservation Teaching Laboratory
460	pw	121	350	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	50 waterlogged leather frags - many of which are from shoes exc at Woodhall in 1994 Lab No. 876 A	Conservation record and picture from Durham University's Conservation Teaching Laboratory
461	w	121	620	o	e	f	Fe	edpre	sb	2	1	1	1	1 c	Fe sickle from Ghubayra 1974/30/23 from Gulbenkian Museum X-ray No. 732	Conservation record from Durham University's Conservation Teaching Laboratory
462	w	121	620	o	e	f	Fe,Wo,Bo,Lh,Pa	edpre	sb	2	1	1	1	1 c	Wooden-handled Fe mirror from Ghubayra 1974/30/24 Gulbenkian Museum X-ray No. 730, 731	Conservation record from Durham University's Conservation Teaching Laboratory
463	w	121	630	o	ce	c	St	sdpre	sb	1	1	1	1	1 c	Limestone tombstome with foliated Kufic (Arabic) inscription from Gulbenkian Museum	Conservation record from Durham University's Conservation Teaching Laboratory
464	w	121	620	o	ce	af	Cu	edpre	sb	1	1	1	1	1 c	Bronze armlet from Ghubayra 1974/30/29 from Gulbenkian Museum X-ray No. 783	Conservation record from Durham University's Conservation Teaching Laboratory
465	w	121	620	o	e	f	Fe	edpre	sb	2	1	1	1	1 c	Fe scissors in 5 pieces from Ghubayra 1974/30/22 from Gulbenkian Museum X-ray No. 731	Conservation record from Durham University's Conservation Teaching Laboratory
466	w	121	600	o	e	f	Ce	sdpre	sb	1	1	1	1	1 c	Mud sealing in conical shape from Gulbenkian Museum	Conservation record from Durham University's Conservation Teaching Laboratory
467	w	121	620	o	e	f	Cu	mdpre	sb	2	1	1	1	1 c	Bronze handle from Ghubayra 1974/30/30 from Gulbenkian Museum X-ray No. 733	Conservation record from Durham University's Conservation Teaching Laboratory
468	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 12 Egyptain bronzes from Wellcome Collection at Gulbenkian Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
469	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 11 Egyptain bronzes from Sakkara from Gulbenkian Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
470	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 15 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
471	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 19 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
472	pw	121	395	o	e	f	Lh	edpre	sb	1	1	1	1	1 c	3 pieces of waterlogged leather from CAR 89 ANN SF 10	Conservation record and picture from Durham University's Conservation Teaching Laboratory
473	pw	121	395	o	e	f	Lh	edpre	sb	1	1	1	1	1 c	4 pieces of waterlogged leather from CAR 89 ANN SF 122	Conservation record and picture from Durham University's Conservation Teaching Laboratory
474	pw	121	350	o	e	f	Cu	mdpre	sb	1	1	1	1	1 c	Cu/A coin exc at Shiptonthorpe SF 1073	Conservation record and picture from Durham University's Conservation Teaching Laboratory
475	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 8 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
476	w	121	735	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 4 Chinese bronzes from Gulbenkian Museum	Conservation record from Durham University's Conservation Teaching Laboratory
477	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 17 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
478	w	121	628	o	ce	c	Cu	mdpre	sb	1	1	1	1	1 c	Collection of 16 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
479	w	121	628	o	ce	c	Cu	edpre	sb	1	1	1	1	1 c	Collection of 10 Egyptian bronzes from Wellcome Collection at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
480	w	121	628	o	ce	c	Cu	edpre	sb	1	1	1	1	1 c	Collection of 10 Egyptian bronzes from Sakkara at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
481	w	121	628	o	ce	c	Cu	edpre	sb	1	1	1	1	1 c	Collection of 13 Egyptian bronzes from Sakkara at Gulbenkain Museum - all under 1 record	Conservation record from Durham University's Conservation Teaching Laboratory
482	pw	121	180	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A coin from reign of George II exc at Woodhall in 1993 Lab No. 829	Conservation record and picture from Durham University's Conservation Teaching Laboratory
483	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe horseshoe exc at Woodhall in 1992 Lab No. 830	Conservation record and picture from Durham University's Conservation Teaching Laboratory
484	pw	121	140	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A farthing from George V's reign exc from Woodhall Lab No. 834	Conservation record and picture from Durham University's Conservation Teaching Laboratory
485	pw	121	180	o	e	f	Ag	mdpre	sb	2	2	1	1	1 c	Ag coin from reign of Elizabeth I exc at Woodhall in 1997 Lab No. 835	Conservation record and picture from Durham University's Conservation Teaching Laboratory
486	pw	121	350	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A bodkin exc at Woodhall in 1992 Lab No. 836	Conservation record and picture from Durham University's Conservation Teaching Laboratory
487	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe horseshoe exc at Woodhall in 1992 Lab No. 837	Conservation record and picture from Durham University's Conservation Teaching Laboratory
488	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe object exc at Woodhall in 1992 Lab No. 838	Conservation record and picture from Durham University's Conservation Teaching Laboratory
489	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe nail & bar exc at Woodhall in 1992 Lab No. 843	Conservation record and picture from Durham University's Conservation Teaching Laboratory
490	pw	121	350	o	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Bent Cu/A pin exc at Woodhall in 1997 Lab No. 845	Conservation record and picture from Durham University's Conservation Teaching Laboratory
491	pw	121	140	o	e	f	Fe	edpre	sb	2	2	1	1	2 c	Cast Fe cauldron exc at DCC (Durham Council Clayppath) by ASUD in 1999. V fragmented & incomplete Lab No. 898	Conservation record and picture from Durham University's Conservation Teaching Laboratory
492	pw	121	375	c	e	f	Tx	edpre	sb	2	2	1	1	2 c	Frag of Anglo-Saxon textile from Whitby Museum Lab No. 900	Conservation record and picture from Durham University's Conservation Teaching Laboratory
493	pw	121	191	o	e	f	Lh,Cu,Fe,Tx	mdpre	sb	2	2	1	1	1 c	Leather banker's briefcase from "Hodgkin, Barnett & Co." prob early 20thC from Beamish Museum Lab No. 1009	Conservation record and picture from Durham University's Conservation Teaching Laboratory
494	pw	121	735	o	ce	fa	Pp,Wo,Cu,Pa,Bo	mdpre	sb	2	2	1	2	1 c	Oriental globe lantern made from casein and painted fro Oriental Museum Lab No. 1011	Conservation record and picture from Durham University's Conservation Teaching Laboratory
495	pw	121	191	o	e	f	Fe	mdpre	sb	2	2	2	2	1 c	Pair of steel handcuffs - prob early 20thC from Beamish Museum Lab No. 1010	Conservation record and picture from Durham University's Conservation Teaching Laboratory
496	pw	121	395	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Piece of waterlogged leather exc at Carlisle in 1989 Lab No. 947	Conservation record and picture from Durham University's Conservation Teaching Laboratory
497	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Rectangular lump of Fe exc at Kush in 1995 Lab No. 923	Conservation record and picture from Durham University's Conservation Teaching Laboratory
498	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe buckle exc at Clarendon Palace in 2000 Lab No. 943	Conservation record and picture from Durham University's Conservation Teaching Laboratory
499	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Lump of Fe exc at Kush in 1997 Lab No. 924	Conservation record and picture from Durham University's Conservation Teaching Laboratory
500	pw	121	620	o	e	f	Cu	mdpre	sb	2	2	1	1	1 c	Cu/A coin exc at Kush in 1995 Lab No. 934	Conservation record and picture from Durham University's Conservation Teaching Laboratory
501	pw	121	350	o	e	f	Gl	mdpre	sb	1	2	1	1	1 c	Uncut glass beads exc at Woodhall in 1997 Lab No. 1003	Conservation record and picture from Durham University's Conservation Teaching Laboratory
502	pw	121	350	o	e	f	Gl	mdpre	sb	1	2	1	1	1 c	Glass bead exc at Woodhall in 1997 Lab No. 997	Conservation record and picture from Durham University's Conservation Teaching Laboratory

503	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Frags of waterlogged wood exc at Woodhall in 1996 Lab No. 969	Conservation record and picture from Durham University's Conservation Teaching Laboratory
504	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Piece of broken glass exc at Woodhall in 1997 Lab No. 998	Conservation record and picture from Durham University's Conservation Teaching Laboratory
505	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Piece of broken window glass exc at Woodhall in 1997 Lab No. 1000	Conservation record and picture from Durham University's Conservation Teaching Laboratory
506	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Piece of broken vessel glass exc at Woodhall in 1997 Lab No. 999	Conservation record and picture from Durham University's Conservation Teaching Laboratory
507	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Many frags of window glass exc at Woodhall in 1997 Lab No. 982	Conservation record and picture from Durham University's Conservation Teaching Laboratory
508	pw	121	350	o	e	f	Pb	edpre	sb	1	2	1	1	1 c	Piece of Pb came exc at KINCMI Lab No. 966	Conservation record and picture from Durham University's Conservation Teaching Laboratory
509	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	2 pieces of curved Cu/A exc at Kush in 1997 Lab No. 936	Conservation record and picture from Durham University's Conservation Teaching Laboratory
510	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Frag of Cu/A exc at Kush in 1997 Lab No. 935	Conservation record and picture from Durham University's Conservation Teaching Laboratory
511	pw	121	191	o	e	f	Fe	mdpre	sb	2	2	2	1	2 c	Pair of steel handcuffs - prob early 20thC from Beamish Museum Lab No. 1004	Conservation record and picture from Durham University's Conservation Teaching Laboratory
512	pw	121	395	o	e	f	Cu	edpre	sb	2	2	0	0	0 c	Cu/A coin from PJC's swag bag Lab No. 957	Conservation record and picture from Durham University's Conservation Teaching Laboratory
513	pw	121	395	o	e	f	Cu	mdpre	sb	2	2	1	0	0 c	Cu/A coin from PJC's swag bag Lab No. 958	Conservation record and picture from Durham University's Conservation Teaching Laboratory
514	pw	121	191	o	e	c	Wo,Ip,Fe	edpre	sb	2	2	1	1	2 c	Wooden model of coble boat - painted from Beamish Museum Lab No. 1005	Conservation record and picture from Durham University's Conservation Teaching Laboratory
515	pw	121	191	o	e	f	Fe,Wo,Lh	mdpre	sb	2	2	1	1	1 c	Miner's pick from Beamish Museum Lab No. 1006	Conservation record and picture from Durham University's Conservation Teaching Laboratory
516	pw	121	350	o	e	f	Fe,Bo	edpre	sb	2	2	1	1	1 c	Fe pin with decorative shell end exc at Clarendon Palace Lab No. 942	Conservation record and picture from Durham University's Conservation Teaching Laboratory
517	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	Pieces of waterlogged wood exc at Woodhall in 1998 Lab No. 970	Conservation record and picture from Durham University's Conservation Teaching Laboratory
518	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe nail exc at Clarendon Palace in 2000 Lab No. 941	Conservation record and picture from Durham University's Conservation Teaching Laboratory
519	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Frag of Fe exc at Kush in 1998 Lab No. 918	Conservation record and picture from Durham University's Conservation Teaching Laboratory
520	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	3 Fe objects exc at Kush in 1996 Lab No. 917	Conservation record and picture from Durham University's Conservation Teaching Laboratory
521	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	2 sherds of glass exc at Woodhall in 1990s Lab No. 993	Conservation record and picture from Durham University's Conservation Teaching Laboratory
522	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Broken glass bead exc at Woodhall in 1997 Lab No. 991	Conservation record and picture from Durham University's Conservation Teaching Laboratory
523	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	3 sherds of glass exc at Woodhall in 1997 Lab No. 994	Conservation record and picture from Durham University's Conservation Teaching Laboratory
524	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	2 sherds of glass exc at Woodhall in 1997 Lab No. 992	Conservation record and picture from Durham University's Conservation Teaching Laboratory
525	pw	121	395	o	e	f	Lf	edpre	sb	1	2	1	1	1 c	17 pieces of waterlogged leather exc at Carlisle in 1998 Lab No. 946	Conservation record and picture from Durham University's Conservation Teaching Laboratory
526	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A loop exc Kush in 1995 Lab No. 930	Conservation record and picture from Durham University's Conservation Teaching Laboratory
527	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A plate (pierced), broken into several frags exc from Kush Lab No. 931	Conservation record and picture from Durham University's Conservation Teaching Laboratory
528	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	63 sherds of window glass exc at Woodhall in 1997 Lab No. 984	Conservation record and picture from Durham University's Conservation Teaching Laboratory
529	pw	121	350	o	e	f	Pb	mdpre	sb	1	2	1	1	1 c	Amophous lump of Pb (poss non-artefactual) exc at KINCM in 1995 Lab No. 965	Conservation record and picture from Durham University's Conservation Teaching Laboratory
530	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe bar exc at Kush in 1997 Lab No. 921	Conservation record and picture from Durham University's Conservation Teaching Laboratory
531	pw	121	620	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe fitting exc at Kush in 1995 Lab No. 922	Conservation record and picture from Durham University's Conservation Teaching Laboratory
532	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A riveted plate exc at Kush in 1996 Lab No. 928	Conservation record and picture from Durham University's Conservation Teaching Laboratory
533	pw	121	620	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Cu/A loop exc at Kush in 1998 Lab No. 929	Conservation record and picture from Durham University's Conservation Teaching Laboratory
534	pw	121	395	o	e	f	Lh	edpre	sb	1	2	1	1	1 c	Pieces of waterlogged leather exc at Carlisle in 1989 Lab No. 938	Conservation record and picture from Durham University's Conservation Teaching Laboratory
535	pw	121	350	o	e	f	Fe	edpre	sb	2	2	1	1	1 c	Fe arrowhead exc at Clarendon Palace Lab No. 945	Conservation record and picture from Durham University's Conservation Teaching Laboratory
536	pw	121	395	o	e	f	Cu	mdpre	sb	1	2	1	1	1 c	Cu/A coin from PJC's swag bag Lab No. 956	Conservation record and picture from Durham University's Conservation Teaching Laboratory
537	pw	121	350	o	e	f	Wo	edpre	sb	1	2	1	1	1 c	3 frags of waterlogged wooden planks exc at Woodhall in 1998 Lab No. 964	Conservation record and picture from Durham University's Conservation Teaching Laboratory
538	pw	121	350	o	e	f	Pb	edpre	sb	1	2	1	1	1 c	Amophous thin lump of Pb exc at KINCM in 1995 Lab No. 972	Conservation record and picture from Durham University's Conservation Teaching Laboratory
539	pw	121	350	o	e	f	Gl	mdpre	sb	1	2	1	1	1 c	Glass bead exc at Woodhall in 1997 Lab No. 973	Conservation record and picture from Durham University's Conservation Teaching Laboratory
540	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of glass exc at Woodhall in 1997 Lab No. 974	Conservation record and picture from Durham University's Conservation Teaching Laboratory
541	pw	121	140	o	e	f	Gl	mdpre	sb	1	2	1	1	1 c	10 sherds of glass exc at Woodhall in 1997 Lab No. 977	Conservation record and picture from Durham University's Conservation Teaching Laboratory
542	pw	121	350	o	e	f	Gl	edpre	sb	1	2	1	1	1 c	Sherds of waterlogged glass exc at Woodhall Lab No. 980	Conservation record and picture from Durham University's Conservation Teaching Laboratory
543	pw	121	151	o	ce	ca	Wo	edpre	sb	2	2	1	2	1 c	Wooden carving of bishop's mitre, poss from Great Hall at the Castle, Durham Lab No. 781	Conservation record and picture from Durham University's Conservation Teaching Laboratory
544	pw	121	350	o	ea	af	St,Ip	edpre	sb	1	2	1	1	1 c	Painted wallplaster frags exc at Clarendon Palace in 2001	Conservation record and picture from Durham University's Conservation Teaching Laboratory
545	pw	121	395	o	e	f	Cu	edpre	sb	1	2	1	1	1 c	Cu/A coin from PJC's swag bag Lab No. 955	Conservation record and picture from Durham University's Conservation Teaching Laboratory
546	pw	121	191	o	e	f	Lh,Cu,Lq	mdpre	sb	2	2	1	2	1 c	Co-operative Wholesale Society football boots "Alert" model prob 1st half 20thC from Beamish Museum lab No. 1007	Conservation record and picture from Durham University's Conservation Teaching Laboratory
547	pw	121	191	o	pe	a	Wo,St,Ip,Au,Gl	mdpre	sb	2	2	1	1	1 c	Gilt picture frame surrounding a portrait of Bessie Dixon from Beamish Museum Lab No. 1015	Conservation record and picture from Durham University's Conservation Teaching Laboratory
548	pw	121	350	o	pe	a	Gl,Ag	mdpre	sb	2	2	1	1	1 c	Glass pendant fitted with silver straps, private owner Lab No. 1017	Conservation record and picture from Durham University's Conservation Teaching Laboratory

549	pw	121	395	o	e	f	Cu	edpre	sb	2	2	1	1	1 c	Bronze bowl exc at Malton-Norton from Malton Museum Lab No. 1013	Conservation record and picture from Durham University's Conservation Teaching Laboratory
550	pw	121	191	o	e	f	Lh,Fe,Cu	mdpre	sb	1	2	1	1	1 c	Leather satchel with Fe buckles & Cu/A rings, prob early 20thC from Beamish Museum lab No. 1012	Conservation record and picture from Durham University's Conservation Teaching Laboratory
551	pw	121	395	o	e	ac	St,Ip	edpre	sb	2	2	1	1	1 c	Frags of painted wallplaster depicting the face of a woman with a nimbus (incomplete) exc at Malton town house site 1949-52 from Malton Museum Lab No. 102o	Conservation record and picture from Durham University's Conservation Teaching Laboratory
552	pw	121	350	o	e	f	Wo,Cu	mdpre	sb	2	2	1	1	2 c	Wooden-handled parchment pricker (or stylus) exc at Durham Leazes Bowl in 1996 Lab No. 1008	Conservation record and picture from Durham University's Conservation Teaching Laboratory
553	pw	121	140	o	e	f	Ce,Ve	edpre	sb	1	2	1	1	1 c	18thC-19thC ceramic pot from South Somerset, partially glazed exc at Shapwick in 1999 Lab No. 948	Conservation record and picture from Durham University's Conservation Teaching Laboratory
554	pw	121	140	o	e	f	Ce,Ve	edpre	sb	1	2	1	1	1 c	Frags of glazed stoneware pot, dated to 19thC exc at Shapwick in 1999 Lab No. 949	Conservation record and picture from Durham University's Conservation Teaching Laboratory
555	pw	121	350	o	e	f	Ce	edpre	sb	1	2	1	1	1 c	145 sherds from 12thC ceramic jar exc at Shapwick Lab No. 996	Conservation record and picture from Durham University's Conservation Teaching Laboratory
556	pw	121	180	o	e	f	Ce,Ve	edpre	sb	1	2	1	1	1 c	Sherds of a partially glaszed ceramic vessel exc at Shapwick in 1996 Lab No. 961	Conservation record and picture from Durham University's Conservation Teaching Laboratory
557	pw	121	180	o	e	f	Ce,Ve	edpre	sb	1	2	1	1	1 c	Glazed ceramic dish, with depiction of cockerel in trailed yellow glaze exc at Shapwick Lab No. 962	Conservation record and picture from Durham University's Conservation Teaching Laboratory
558	pw	121	350	o	e	f	Ce	edpre	sb	1	2	1	1	1 c	Frags of cramic vessel exc at Shapwick Lab No. 1001	Conservation record and picture from Durham University's Conservation Teaching Laboratory
559	pw	121	350	o	e	f	Ce	edpre	sb	1	1	1	1	1 c	12 sherds of 11thC-12thC coarseware vessel exc at Shapwick lab No. 950	Conservation record and picture from Durham University's Conservation Teaching Laboratory
560	pw	121	350	o	e	f	Pb	edpre	sb	1	2	1	1	1 c	Thin blob of Pb exc at KINCM in 1995 Lab No. 972	Conservation record and picture from Durham University's Conservation Teaching Laboratory
561	pw	121	350	o	e	f	Pb	mdpre	sb	1	2	1	1	1 c	Amorphous lump of Pb exc at KINCM in 1995 Lab No. 671	Conservation record and picture from Durham University's Conservation Teaching Laboratory
562	pw	121	350	o	e	f	Pb	mdpre	sb	1	2	1	1	1 c	Amorphous lump of Pb exc at KINCM in 1995 Lab No. 967	Conservation record and picture from Durham University's Conservation Teaching Laboratory
563	pw	121	350	o	e	f	Pb	mdpre	sb	1	2	1	1	1 c	Amorphous lump of Pb exc at KINCM in 1995 Lab No. 965	Conservation record and picture from Durham University's Conservation Teaching Laboratory
564	o	628	628	o	c	fc	St	edpre	ub	0	0	0	1	0 c	Small travertine vase dated to the Old Kingdom in Egypt acc 195/22 from Oriental Museum	Object from Oriental Museum, Durham
565	o	110	628	o	e	fc	St	edpre	ub	0	0	0	1	1 c	Small travertine vase dated to the Old Kingdom in Egypt acc 195/22 from Oriental Museum	Object from Oriental Museum, Durham
566	ow	121	140	o	pe	ca	Tx	mdpre	sb	1	2	2	2	2 c	Victorian sampler in petite pointe embroidery	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
567	ow	121	628	c	ce	ca	Cu	edpre/sdp	sb	0	0	1	1	1 c	Cu/A figurine of Isis & Horus from the Egyptain late period (Ptolemaic) from the Oriental Museum	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
568	o	110	140	c	e	f	Fe	mdpre/sdp	ub	0	0	2	2	2 c	19thC Fe shoe last from Sommerset from Uni of Durham's teaching collection	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
569	o	121	140	c	e	f	Cu	mdpre/sdp	sb	0	0	1	1	2 c	Collection of bronze pins from18th-19thC context from Uni of Durham's teaching collection	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
570	o	121	140	c	e	f	Ce	edpre/edp	sb	0	0	2	1	1 c	Straight-sided ceramic vessel from Uni of Durham's teaching collection	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
571	o	121	910	o	pe	f	Lh,Ip	mdpre	sb	1	2	2	2	1 c	Leather bag from South America	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
572	o	110	395	c	e	f	Fe,Wo,Gl,Pp,Sn	edpre/edp	ub	0	0	1	1	1 c	Fe nails from Inchtuthil mounted in box	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
573	o	110	140	c	e	f	Fe	mdpre/sdp	ub	0	0	2	2	2 c	19thC Fe horseshoe from field-walking in Shropshire from Uni of Durham's teaching collection	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
574	o	110	395	c	e	f	Ce,Wo	edpre/edp	ub	0	0	1	1	2 c	Roof tile	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
575	ow	121	628	c	ce	ca	Cu,Au	edpre	sb	0	0	1	1	1 c	Cu/A Wadjet figurine from Egyptian Late Period (Ptolemaic) from Oriental Museum	Object from "the box of artefacts", at Durham University's Conservation Teaching Laboratory
576	p	965	965	o	ce	fc	Ba	mdpre	ub	0	0	0	2	1 c	Maori flax belt with native repair PRM 1886.21	p.12 Coope, J "Curiosities from the Endeavour: a forgotten collection", Christies, UK
577	p	965	965	o	ce	f	Wo,Cu	edpre	ub	0	0	0	1	0 c	Wooden canoe baler, split and repaired with metal ties - putative native repair PRM 1887.1.381	p.18 Coope, J "Curiosities from the Endeavour: a forgotten collection", Christies, UK
578	p	965	965	o	ca	ca	St	edpre	ub	0	0	0	1	0 c	Green stone hei tiki rutateawhenga perndant - broken section held in place by holes drilled either side of the break to receive tie. Putative native repair	p. 17 "Maori Art: The Photography of Brian Brake", Reed
579	pr	965	965	o	ce	ca	Bo,Ip	mdpre	sb	1	2	2	2	1 c	Rei puta (neck ornament) made from sperm whale tooth with flax cord C765	Book: "Eighteenth century ethnographic collections at the Hancock Museum"
580	pw	121	628	o	ea	ca	Wo,St,Ip	edpre	sb	1	2	1	1	1 c	Egyptain painted wooden panel from Sunderland Museum Lab No. 93/387	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
581	w	121	628	o	ce	c	Wo,St,Ip,Lh,Fr	edpre	sb	2	2	1	1	1 c	Mummy (Irt Irw) with inner & outer coffin from Oriental Museum(?) Lab No. 88/1 A+B	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
582	pw	121	628	o	e	fc	Ba	mdpre	sb	1	2	2	1	1 c	Pair of Egyptian flax sandals fron Newcastle Museum of Antiquities Lab No. 06/174	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
583	pw	121	965	o	ce	ca	Wo,Bo,Pp	mdpre	sb	1	2	1	1	1 c	Maori wooden "treasure" box on crouching figure with supine figure on detachable lid from Hancock Museum Lab No. 97/399	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
584	pw	121	965	o	ce	ca	Bo	sdpre	sb	1	2	1	1	1 c	Maori whalebone club from Hancock Museum Lab No. 97/393	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
585	pw	121	965	o	ce	ca	St	sdpre	sb	1	2	1	1	1 c	Maori basalt club from Hancock Museum Lab No. 97/392	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
586	pw	121	985	o	ce	f	Ba	sdpre	sb	1	2	1	1	1 c	Gourd container with plaited coir net from Hancock Museum Lab No. 97/389	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
587	pw	121	965	o	ce	ca	Wo,Fr	sdpre	sb	1	2	1	1	1 c	Maori wooden club with feather (tewhokewhe) from Hancock Museum Lab No. 97/364	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
588	pw	121	430	o	ac	ac	St	edpre	sb	1	2	1	1	1 c	Marble statue of wrestlers "the wrestlers" (late C3rd BC - early C2nd BC) from Newcastle Uni's Shefton Museum Lab No. 01122	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
589	pw	390	430	o	ac	ac	St	edpre	snb	0	0	0	2	0 c	Marble statue of wrestlers "the wrestlers" (late C3rd BC - early C2nd BC) from private owner. Putative Roman repair from Lab No. 01122	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
590	pw	330	430	o	ac	ac	St	edpre	snb	0	0	0	2	0 c	Marble statue of wrestlers "the wrestlers" (late C3rd BC - early C2nd BC) from private owner. Putative Renaissance repair from Lab No. 01122	Conservation record and picture from the conservation practice at House of Discovery, Newcastle - copy of record kept by Clare Hucklesby
591	o	121	935	o	ac	cf	St,Ip,Pp	edpre	sb	0	0	0	1	1 c	Cave painting of kangaroo MIDDM 1904.1800, broken and repaired with adhesive. Poss broken when removed from cave from Dorman Museum	Object from the Dorman Museum, Middlesbrough
592	o	110	935	o	ce	fc	Wo	edpre	unb	0	0	0	1	0 c	Wooden throwing stick/club M314/19880 repaired with dowel to brace crack. Poss repaired by collector W. Dodds from Dorman Museum	Object from the Dorman Museum, Middlesbrough
593	o	110	935	o	ce	fc	Wo,Pp	edpre	unb	0	0	0	1	0 c	Wooden boomerang 1904/1766 broken and repaired with adhesive. Poss repaired by collector W. Dodds from Dorman Museum	Object from the Dorman Museum, Middlesbrough

594	o	935	935	o	pf	fc	Wo	edpre	ub	0	0	0	1	0	c	Wooden boomerang 1904/1785 broken and poss repaired with ties passed through holes made either side of break. Putative native repair	Object from the Dorman Museum, Middlesbrough
595	o	110	935	o	ce	fc	Wo,Pp	edpre	unb	0	0	0	1	0	c	Wooden boomerang 1904/1785 broken and repaired with adhesive. Poss repaired by collector W. Dodds. Holes either side of break suggest an earlier Native repair, from Dorman Museum	Object from the Dorman Museum, Middlesbrough
596	o	110	935	o	ce	fc	Wo,Ip,Pp	edpre	unb	0	0	0	1	0	c	Wooden boomerang M31/1980 AUS broken in several palces & stuck together with adhesive. Joins are over-painted with red pigment. Poss repaired by collector W. Doods, from Dorman Museum	Object from the Dorman Museum, Middlesbrough
597	o	110	935	o	ce	fc	Wo,Pp,Ip	edpre	unb	0	0	0	1	0	c	Wooden boomerang 1904/1787 broken and repaired with adhesive, infill & pigment. Poss repaired by collector W. Dodds, from Dorman Museum	Object from the Dorman Museum, Middlesbrough
598	o	845	845	o	ce	fc	Fe,Bo,Lh	edpre	ub	0	0	0	1	0	c	Fe knife with bone handle and carved bone sheath M818/1985. Sheath split & held together with nails & leather. Putative native repair	Object from the Dorman Museum, Middlesbrough
599	o	628	628	o	p	f	Ce,Pp	edpre	ub	0	0	0	1	0	c	Black ceramic vessel broken into 6 pieces, displaying 2 sets of drill holes either side of break in 2 sherds. Petrie Coll 107 24 AEGYPT 237	Object at the Hancock Museum , Newcastle
600	o	628	628	o	p	f	Ce	edpre	ub	0	0	0	1	0	c	Ceramic jug with black resinous substance built up over crack, as ancient repair. NORTH 420.	Object at the Oriental Museum, Durham
601	o	628	628	o	p	f	Ce	edpre	ub	0	0	0	1	0	c	Ceramic vessel broken in two, displaying drill holes either side of each break. No evidence of ties.	Object at the Hancock Museum , Newcastle
602	pr	628	628	o	ca	ca	St	edpre	ub	0	0	0	2	0	c	Sphinx at Giza restored by Thutmoses IV	Written account at htpp//www.touregypt.net
603	pr	628	628	o	ca	ca	St	edpre	ub	0	0	0	2	0	c	Stone statue of Old Kingdom prince, at Memphis, restored by Khaemwese	Written account at htpp//www.touregypt.net
604	o	628	628	o	ca	ca	Cu,Ce,Wo	edpre	ub	0	0	0	2	0	c	Cu/A statuette of Osiris broken below the knee, repaired with wooden dowl & gesso fill.WELLCOME/R163.	Object at the Oriental Museum, Durham
605	o	628	628	o	ca	ca	Cu,Ce	edpre	ub	0	0	0	2	0	c	Cu/A statuette of Osiris broken in 3 & repaired with black clay. Drill holes present, presumed to be for dowels. WEL257.	Object at the Oriental Museum, Durham
606	o	628	628	o	ca	ca	Cu	edpre	ub	0	0	0	2	0	c	Cu/A statuette broken so that feet & base remain. A Cu/A dowel projects from each ankle. U617.	Object at the Oriental Museum, Durham
607	o	628	628	o	ca	ca	Cu,Ce	edpre	ub	0	0	0	2	0	c	Cu/A statuette broken so that only feet remain. Figure filled with clay, which shows holes for repair dowels. U561.	Object at the Oriental Museum, Durham
608	o	628	628	o	ca	ca	Cu,Ce	edpre	ub	0	0	0	2	0	c	Cu/A statuette of Osiris with missing feet. Body filled with clay, which shows holes to receive repair dowels. NORTH 163.	Object at the Oriental Museum, Durham
609	pr	628	628	o	ca	ca	Cu	edpre	ub	0	0	0	2	0	c	Cu/A cat sarcophagus with porous areas from casting, strenthened with a cast in repair.	pp. 41-50 Schorsch, D. "Technical examinations of Ancient Egyptain Theriomorphic cast bronzes - some case studies" in Conservation of Anciet Egyptian Materials, 1988, Eds S. C. Watkins & C. E. Brown, UKIC Archeaology Section, London
610	pr	628	628	o	ca	ca	Cu,Ce	edpre	ub	0	0	0	2	0	c	Cu/A statuette of deity Heru-Ur (EA 11528) with detached arm that's been filled with clay and drilled to receive a dowl.	pp. 29-34 Shearman, F. "An original decorated surface on an Egyptain bronze statuette" in Conservation of Anciet Egyptian Materials, 1988, Eds S. C. Watkins & C. E. Brown, UKIC Archeaology Section, London
611	o	628	628	o	cf	cf	Cu	mdpre	ub	0	0	0	2	0	c	Cu/A knife used in the process of mummification.	Photo of surgical knives at htpp//www.sciencemuseum.org.uk
612	o	628	628	o	cf	cf	Cu	mdpre	ub	0	0	0	2	0	c	Cu/A hooked knife used in the process of mummification.	Photo of surgical knives at htpp//www.sciencemuseum.org.uk
613	o	628	628	o	cf	cf	Cu	mdpre	ub	0	0	0	2	0	c	Cu/A blade used in the process of mummification.	Photo of surgical knives at htpp//www.sciencemuseum.org.uk
614	o	628	628	o	ca	ca	St	edpre	ub	0	0	0	2	0	c	Black granite pharoh's head, with extensive loss and gesso remains marking attempted repair. WEL 241.	Object at the Oriental Museum, Durham
615	pr	628	628	o	ca	ca	St	edpre	ub	0	0	0	2	0	c	Calcite statue of Pepy I with breaks at head & crown, showing drill to receive dowels.	Eds. Brown, C.E., Aacalister, F. & Wright M.M. 1995 "Conservation in ancient Egyptain collections: papers given at the conference organised by the UKIC, Archaeology Section, & International Academic Projects, held at London, 20-21 July 1995", Archetype, London
616	pr	628	628	o	ca	ca	St	edpre	ub	0	0	0	2	0	c	Double stone statue of seated Amun & Mut at Luxor. Cavity of Mut's nose fashioned to receive repair.	Photo at htpp//www.touregypt.net
617	pr	628	628	o	cf	cf	St,Ip	edpre	ub	0	0	0	3	0	c	Stone temple at Memphis, restored by Khaemwese.	Written account at htpp//www.touregypt.net
618	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Samian ware sherd with maker's name in decoration & drilled hole with Pb plug.	Object at Arbeia Roman Fort, South Shields
619	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Stone-like ceramic mortarium (C3rd AD) from Housesteads. Broken in several places & clamped by Pb rivets.	Object at Museum of Antiquities, Newcastle
620	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Ceramic cooking pot (C4th AD) from South Shields. Cracked & mended with Pb clamps.	Object at Museum of Antiquities, Newcastle
621	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Small Samian ware bowl sherd with Pb rivet.	Object at the Roman Army Museum, Northumberland
622	o	390	390	o	cf	fc	Ce,Fe,Au	edpre	ub	0	0	0	1	0	c	Sherd of Samian ware bowl with Fe, Au-plated repair rivet hidden on the inside of the bowl.	Object at the Roman Army Museum, Northumberland
623	o	390	390	o	cf	fc	Ce	edpre	ub	0	0	0	1	0	c	Samian ware bowl (incomplete) with drilled holes to receive some form of tie.	Object at the Roman Army Museum, Northumberland
624	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	2 Samian ware joined sherds from small, decorated vessel. Joined with Pb rivets.	Object at the Roman Army Museum, Northumberland
625	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	2 Samian ware rim sherds joined with 2 Pb rivets passed through drilled holes. No. 1849.	Object at Chesters Museum
626	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	South Gaulish Samian bowl (from Dr 37) repaired with 3 sets of Pb rivets.	Object at Corbridge Museum
627	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	4 sherds of decorated Samian ware vessel with Pb rivets, exc at Arbeia in 1990. L52.	Object at Arbeia Roman Fort, South Shields
628	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Sherd of decorated Samian ware pottery with delaminated surface & Pb rivet repair. Exc at Arbeia in 1990, L53.	Object at Arbeia Roman Fort, South Shields
629	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Sherd of Dr 37 form Samian ware bowl held together withh 2 Pb clamps. Exc at Arbeia c1990-1, L65.	Object at Arbeia Roman Fort, South Shields
630	o	390	390	o	cf	fc	Ce,Pb	edpre	ub	0	0	0	1	0	c	Sherd of Samian ware vessel showing Pb repairs. Exc at Arbeia 1992, L78.	Object at Arbeia Roman Fort, South Shields
631	o	390	390	o	pc	fc	Cu	edpre	ub	0	0	1	1	0	c	Cu/A trumpet brooch with catchplate repaired with 2 rivets. BR1299.	Object at Arbeia Roman Fort, South Shields
632	o	390	390	o	pc	fc	Cu	edpre	ub	0	0	1	1	0	c	Cu/A belt buckle fastening with ancient repair. BR351.	Object at Arbeia Roman Fort, South Shields
633	pw	390	390	o	pc	fc	Cu,Sn	edpre	ub	0	0	1	1	0	c	Cu/A horse harness fitting with eagle decoration. Ancient repair to central disc made with metal plate & solder. CAR00 SF2040.	Conservation record and picture from Durham University's Conservation Teaching Laboratory
634	o	390	390	o	f	f	Lh,Fe	edpre	ub	0	0	0	1	0	c	Caliga or military hob-nailed sandal, with hob-nail repair to sole.	Object at the Roman Army Museum, Northumberland
635	o	390	390	o	f	f	Lh,Fe	edpre	ub	0	0	0	1	0	c	Caliga hob-nailed sandal with leather & nail repair to sole.	Object at the Roman Army Museum, Northumberland
636	o	390	390	o	f	f	Lh,Fe	edpre	ub	0	0	0	1	0	c	Caliga hob-nailed (Fe) leather sandal with nail repair to sole.	Object at the Roman Army Museum, Northumberland
637	o	390	390	o	f	f	Fe,Cu,Lh	edpre	ub	0	0	1	1	0	c	Squamata armour with rivetted repair to plates.	Object at the Roman Army Museum, Northumberland
638	pr	390	390	o	f	f	Fe,Cu,Lh	edpre	ub	0	0	1	1	0	c	Mid collar plates, from lorica segmentata in the Corbridge Hoard, showing rivetted repair.	p. 29 Eds. Allason-Jones, L. et al 1988 "Excavations at Roman Corbridge: The Hoard", Historic Buildings & Monuments Commission for England, London
639	o	390	390	o	f	f	Fe,Cu,Lh	edpre	ub	0	0	1	1	0	c	Squamata armour with rivetted repair to plates.	Object at the Roman Army Museum, Northumberland
640	pr	845	845	o	f	f	Ba	edpre	ub	0	0	0	1	0	c	Pomo mush bowl with basket-patch repair.	p. 204 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum", Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.
641	pr	845	845	o	f	f	Wo,Ip	edpre	ub	0	0	0	1	0	c	Tlingit polychromed wooden clan hat, 1820, with native repair.	Photo p.117, Pl. 104 of 1982 Furst & Furst Catalogue cited on http://www.johnmoran.com
642	pr	845	845	o	f	f	Ba	edpre	ub	0	0	0	1	0	c	Hupa "hat" style basketry bowl (early C20th) with inch-long repair to rim.	Photo of Arizona collector's Hupa bowl on http://www.johnmoran.com
643	pr	845	845	o	f	f	Tx	edpre	ub	0	0	0	1	0	c	Hand-spun Zuni poncho with several repairs.	p.126 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum", Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.
644	pr	845	845	o	f	f	Tx	edpre	ub	0	0	0	1	0	c	Zuni woman's dress of hand-woven wool with repair to decorative red stiching.	p.129 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum", Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.

645	pr	845	845	o	fc	fc	Bo,Ba	mdpre	ub	0	0	0	1	0	c	Two-piece Lingit fish hook for catching salmon.	Photo at http://www.alaska.si.edu
646	pr	845	845	o	fc	fc	Bo,Ba	mdpre	ub	0	0	0	1	0	c	Two-piece Lingit bone fish hook for catching cod.	Photo at http://www.alaska.si.edu
647	pr	845	845	o	fc	fc	Bo,Ba	mdpre	ub	0	0	0	1	0	c	Two-piece bone fish hook with wolf design, for catching halibut.	Picture on p. 52 "Indian Fishing: Early Methods on the Northwest Coast" c1977, Stewart, H., Douglas & McIntyre Ltd, Vancouver, Canada.
648	pr	845	845	o	ca	ca	Cu	dd	ub	0	0	1	3	0	c	Kwakiutl clipped Cu/A ceremonial shield.	p.23 von Aderkas, E. & Hook, C. 2005 "American Indians of the Pacific Northwest", Osprey Publishing, Oxford, UK.
649	pr	845	845	o	cf	cf	Wo,Ba,Ip,Pp	sdpre	ub	0	0	1	2	0	c	Repainted Navajo god impersonator mask from Nightway curing ceremony.	p. 94 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum, Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.
650	pr	845	845	o	cf	cf	Wo,Ba,Ip,Pp	sdpre	ub	0	0	1	2	0	c	Navajo god impersonator "Talking God" mask from Nightway curing ceremony.	Photo from the Smithsonian Museum of the American Indian in "Navajo Ceremonial System", 1983, Wyman, L.C.
651	pr	845	845	o	cf	cf	Wo,Ba,Ip,Pp	sdpre	ub	0	0	1	2	0	c	Navajo god impersonator "Gray God" mask from Nightway curing ceremony.	Photo from the Smithsonian Museum of the American Indian in "Navajo Ceremonial System", 1983, Wyman, L.C.
652	pr	845	845	o	cf	cf	Wo,Ba,Ip,Pp	sdpre	ub	0	0	1	2	0	c	Navajo god impersonator "Female God" mask from Nightway curing ceremony.	Photo from the Smithsonian Museum of the American Indian in "Navajo Ceremonial System", 1983, Wyman, L.C.
653	pr	845	845	o	cf	cf	Wo,Ba,Ip,Pp	sdpre	ub	0	0	1	2	0	c	Navajo repainted sun's house screen.	p. 94 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum, Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.
654	pr	845	845	o	fc	fc	Wo,Tx,Lh,Ip	mdpre	ub	0	0	1	2	0	c	Zuni Kachina doll with tied repair to one arm.	p. 150 "Objects of Myth & Memory: American Indian Art at the Brooklyn Museum, Fane, D., Jacknis, I., Breen, L.M., 1991, Brooklyn Museum, N.Y.
655	pr	845	845	o	fc	fc	Wo,Fe	mdpre	ub	0	0	1	2	0	c	Sauk wooden ladle with Fe staples through split. Museum of the American Indian.	Photo p. 650 "Handbook of North American Indians Vol. 15: Northeast", 1978, Ed. B.G. Trigger, Smithsonian Institution, Washinton D.C.
656	pr	845	845	o	fc	fc	Wo,Fe	mdpre	ub	0	0	1	2	0	c	17th century Uncas 2-handled wooden bowl with Fe staples through split. Slater Memorial Museum.	Photo p.171 "Handbook of North American Indians Vol. 15: Northeast", 1978, Ed. B.G. Trigger, Smithsonian Institution, Washinton D.C.
657	o	171	171	o	pc	f	Cu,Tx	edpre	ub	0	0	2	0	0	c	Cavalry trumpet carried by J.R. Samson, dented and reshaped.	Object at the Soldier's Life exhibition, Discovery Museum, Newcastle
658	o	171	171	o	pc	f	Cu,Pp	edpre	ub	0	0	2	0	0	c	Car trumpet used by dispatch rider Tpr George Steel. Dented & bashed out.	Object at the Soldier's Life exhibition, Discovery Museum, Newcastle
659	o	171	171	o	f	f	Lh,Wo,Fe,Tx	mdpre	ub	0	0	2	1	1	c	Pair of polished, soldier's boots	Object at the Soldier's Life exhibition, Discovery Museum, Newcastle
660	o	171	171	o	f	f	Fe,Wo,Lh	mdpre	ub	0	0	2	1	0	c	British Boer War rifle, Lee Enfield Carbine, used by mounted Infantry in S. Africa.	Object at the DLI Museum, Durham
661	o	171	171	o	f	f	Fe,Wo,Cu	mdpre	ub	0	0	2	1	0	c	British rifled musket & bayonet 1856.	Object at the DLI Museum, Durham
662	o	171	171	o	cf	cf	Ag,Lh	sdpre	ub	0	0	2	0	0	c	Trophy belt with silver name plates.	Object at the DLI Museum, Durham
663	o	171	171	o	cf	cf	Ag	sdpre	ub	0	0	2	0	0	c	Silver bugle of the 1st Battalion DLI, 1935.	Object at the DLI Museum, Durham
664	o	171	171	o	cf	cf	Ag	sdpre	ub	0	0	2	0	0	c	Silver sports cup of the 3rd Battalion DLI, 1915.	Object at the DLI Museum, Durham
665	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Order of the British Empire medal awarded to Colonel H. Johnson.	Object at the DLI Museum, Durham
666	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Victory Medal (1914-1918) awarded to Captain H. Johnson.	Object at the DLI Museum, Durham
667	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Territorial Force War medal (1914-19) awarded to "LIEUT. H. JOHNSON DURH.L.I.".	Object at the DLI Museum, Durham
668	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	1939-45 Star medal awarded to Colonel H. Johnson.	Object at the DLI Museum, Durham
669	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Africa Star medal (1940-43) awarded to Colonel H. Johnson.	Object at the DLI Museum, Durham
670	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Italy Star medal (1943-45) awarded to Colonel H. Johnson.	Object at the DLI Museum, Durham
671	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Victoria Cross of Richard Wallace Annand, presented by George VI on 3rd September 1940.	Object at the DLI Museum, Durham
672	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Victoria Cross of Adam Herbert Wakenshaw (World War II).	Object at the DLI Museum, Durham
673	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Victoria Cross of Thomas Young (World War I).	Object at the DLI Museum, Durham
674	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Victoria Cross of Michael Heaviside (World War I).	Object at the DLI Museum, Durham
675	o	171	171	o	pc	cr	Cu,Tx	mdpre	ub	0	0	2	0	0	c	Military Cross medal (1915-37) awarded to Philip Kirkup.	Object at the DLI Museum, Durham
676	o	171	171	o	p	f	Sn,Ag	edpre	ub	0	0	1	0	0	c	Ag cigarette case damaged by bullet in World War II.	Object at the DLI Museum, Durham
677	o	171	171	o	p	f	Tx,Cu,Lh	edpre	ub	0	0	1	0	0	c	Officer's khaki jacket 1st Battalion DLI 1900s. Showing field repair & worn by Hubert Coddington whein it was hit by a bullet.	Object at the DLI Museum, Durham

Appendix 8 - Key to interpreting database results

This appendix provides the key for the abbreviations used in the records database (Appendix 7). For full definitions of the categories see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Source material:

This is the source of the information that forms the basis of each questionnaire record. The options are:

o = object i.e. an artefact has been inspected;
w = written record e.g. a conservation record;
pr = published record e.g. an article, journal entry or a website;
p = picture e.g. an illustration or photograph of an artefact.

Therefore, **ppr** would indicate that a picture and published record have provided the evidence for the record. The picture could appear within the published record.

Conserving culture:

The three-digit number represents the cultural group responsible for the conservation of the artefact in question.

The number is selected from the options on the Culture Tree (p. 22 the Methodology or Appendix 9).

Culture conserved:

The three-digit number represents the culture that produced the artefact in question.

The number is selected from the options on the Culture Tree (p. 22 the Methodology or Appendix 9).

Party responsible for object:

This represents the party responsible for the artefact. The options are:

o = owner;
c = custodian / curator;
u = usurper.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Why object preserved:

This is the reason(s) for preserving or conserving an artefact. The options are:

f = functional;
c = cultural;
p = personal;
£ = capital;
a = aesthetic;
e = educational.

Up to two reasons can be selected, with the primary reason placed first. Therefore, **ca** = cultural, followed by aesthetic.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Type of object preserved:

This represents the sort of object preserved or conserved. The options are:

f = functional;
c = cultural;
r = commemorative;
a = aesthetic.

Up to two types can be selected, with the primary function placed first. Therefore, **fc** = functional, followed by cultural.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Materials:

This represents the materials of which the artefact is composed, in order of volume (greatest to smallest). Up to five materials can be selected. The options are:

Ag –	Silver	**St** –	Stone
Au –	Gold	**Ip** –	Ink, Pigment, Dye
Cu –	Copper alloy	**Lq** –	Lacquer
Fe –	Iron	**Pa** -	Paper
Pb –	Lead	**Tx** –	Textile
Sn –	Tin, Pewter	**Ba** –	Basketry, Grasses, Leaves
Mm -	Modern metals (Al, Pt, Zn etc)	**Bo** –	Bone, Ivory, Shell, Antler
Ce –	Ceramic		Horn
Gl –	Glass	**Fr** –	Fur, Hair, Feathers
Ve –	Vitreous material, Enamel	**Lh** –	Leather, Hide
Pp –	Plastic, Polymer	**Wo** -	Wood

Deterioration:

This is a representation of the deterioration than can be observed for the artefact. All deterioration should be noted. The options are:

nd = no deterioration;
sd = superficial deterioration;
ed = extensive deterioration;
dd = deliberate damage.

A suffix of –**pre** or –**post** can be added if it is apparent that deterioration has occurred pre-conservation or post-conservation.

edpre / sdpost = extensive deterioration pre-conservation and superficial deterioration post-conservation.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Who conserved object:

This represents the party undertaking the conservation work. The options are:

sb = skilled believer;
ub = unskilled believer;
snb = skilled non-believer;
unb = unskilled non-believer.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Balance of techniques:

This represents the type of treatment an object has undergone. A number should be placed under each category. The options are:

I – investigation:

0 = no investigation ;

1 = simple investigation;

2 = extensive investigation.

R = recording:

0 = no recording;

1 = rudimentary recording;

2 = extensive recording.

C = cleaning:

0 = no cleaning;

1 = some cleaning;

2 = extensive cleaning.

A = intervention:

0 = no interventive treatment;

1 = condition of object stabilised;

2 = object restored to working order or original appearance;

3 = object altered beyond original form or function.

P = preservation:

0 = no preserving action taken;

1 = object stabilised through removal of environmental / physical threats;

2 = specialised storage system devised for object.

For full definitions see the structured questionnaire instruction booklet (pp. 14-22 in the Methodology or Appendix 9).

Occupation:

This represents the occupation of the party filling out the questionnaire form. The options are:

c = conservator;

a = curator or archaeologist;

o = other occupation.

What the preserved object is:

This is a description of the artefact.

Source of the information:

This is a description of the source material for each record.

Culture codes for the most frequently occurring cultures:

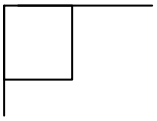
121 (Post 1945) Conservation laboratory culture;
171 18th –20th century Military / regimental culture;
390 Roman culture;
628 Ancient Egyptian culture;
845 American Indian culture;
935 Australian Aboriginal culture;
965 Maori culture.
110 Late 19th century Western culture
140 18th –20th century Western culture;
151 18th-20th century Religious culture;
161 18th-20th century country house culture;
180 Post Medieval 17th-20th century culture;
191 Social history culture;
330 Renaissance culture;
350 Medieval culture;
362 High Medieval religious culture;
366 Medieval secular culture;
371 Viking / Anglo-Scandinavian culture;
375 Anglo-Saxon culture;
395 Romano-British culture;
430 Greek culture;
520 European Bronze Age culture;
620 Near Eastern culture;
650 Middle Eastern culture;
712 Post 17th century Indian culture;
735 Chinese culture;
742 Post 17th century Chinese culture;
755 Japanese culture;
800 Ethnographic culture;
910 South American culture.

APPENDIX 9 – INSTRUCTION BOOKLET FOR STRUCTURED QUESTIONNAIRE

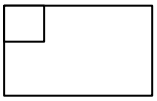
INTRODUCTION:
The sample form on p.2 has been designed to gather information about the motivations for preservation and the conservation techniques that have been employed by different cultural groups throughout time.

The numbers beside the boxes refer to a list of instructions, the details of which are given below (pp.3-8).

After examining the group of artefacts and any associated material, please fill the **small square boxes** using the options provided in each section. Only use designated letters/numbers. If there seems to be no exact match select the closest alternative.



The **larger rectangular boxes** provide an opportunity to add descriptions or details. E.g. the large box in 3a) can be filled with details such as the name, date and origin of the artefact(s) in question.



SPECIAL NOTES:
Where boxes are bracketed (i.e. 2b) and 3a)) these can be filled if it is felt that a secondary category is in strong evidence.

Up to 5 materials can be selected for 3b) and these should be ordered proportionally, so that the material with the greatest volume appears first.

For section 5) a number should be entered into each box.

Brief descriptions for each of the available terms are given below (pp.3-8). The terms are printed in **bold type**. Please take time to read through these before filling any of the boxes.

If you are uncertain about the option that you have selected or the details you have written, you can place a "?" after the letter/number or phrase in question.

Questionnaire for recording the conservation details and circumstances

Record number

Source material Object **Written record** **Published record** **Picture**

1a) Conserving culture **1b) Culture conserved**

Number

Number

2a) Party responsible for the object

Letter

2b) Why the object has been preserved

3a) The type of object preserved

3b) The materials that the object comprises

3c) The deterioration that is evident **pre-conservation** **Post-conservation** **Either pre or post cons.**

4) Who conserved the object

Letters

5) The balance of techniques used to preserve the object

I **R** **C** **A** **P**

6) The occupation of the party filling out this form

Conservator **Curator/Archaeologist** **Other**

7) **Other notes**

SECTION DESCRIPTIONS AND TERMS:

Record number: A unique record number has been assigned to each of the objects in this experiment. Write the designated number, given in the information with the object, in the "Record number" box.

Source material: Assess the type of source material that you are working from and place a tick in the box(es) to the right of the relevant description(s).

1a) Conserving culture: Select a number from the list on p.9 that most closely corresponds with the group responsible for conserving the object and place it in the small box. BE AS SPECIFIC AS POSSIBLE.

In the large box supply details, where known, of the name, location and approximate date of the group. NB: this information is especially important if a generic cultural grouping has been selected.

1b) Culture conserved: Select a number from the list on p.9 that most closely corresponds with the social group from which the object to be conserved has been derived and write it in the small box.

In the large box supply details, where known, of the name, location and approximate date of the group. NB: this information is especially important if a generic cultural grouping has been selected.

2a) Who holds responsibility for the object?:

For this box select the initial letter of the phrase (in bold type) that most accurately describes the responsible party and place it in the small box.

In the large box supply details, where known, of the name and location of the responsible party.

O = Owner: A party that has exclusive rights pertaining to the use and treatment of an object. All decisions regarding the fate of the object can be made by this party. *E.g. private owner, be they individual, family, company or institution.*

C = Custodian/curator: A party that is usually appointed to manage the use and treatment of an object. Many decisions regarding the fate of the object can be made by this party. However, major decisions must sometimes be referred to a second party (usually the owner) for approval. *E.g. museum curator or housekeeper.*

U = Usurper: A party that acts as though they have the exclusive rights of ownership pertaining to the use and treatment of the object. However, for legal or technical reasons these rights are illusory and the party has no real authority to instigate treatment. *E.g. thief or non-legal owner (unknowingly buying stolen goods).*

2b) Why has an object been preserved?:

For this box select the initial letter of the word (in bold type) that most closely fits the reason and write it in the box. The second, bracketed box can be filled if there seems to be a strong secondary reason.

F = Functional: An object has been retained because it exhibits a desirable utilitarian capacity. *E.g. furniture, tools or buildings.*

C = Cultural: An object has been retained because it possesses a symbolic function that eclipses utilitarian value. Cultural objects possess a contextual significance and can hail from any definable section within a society, be it religious, political or economic. *E.g. Bishop's crosier, the Budget case or a flag.*

P = Personal: An object has been retained because it possesses associations with the experiential past of a given individual. The value is often symbolic, since the object is past evoking, and not necessarily discernible to other parties. *E.g. a childhood toy, gift of low monetary value or trinket.*

£ = Capital: An object has been retained primarily as an investment, because it possesses an economic or exchange value. *E.g. cut gemstones or mint coins.*

A = Aesthetic: An object has been retained because it has a value derived from bringing pleasure to the senses. *E.g. painting or sculpture.*

E = Educational: An object has been retained because it possesses a potential for study, discussion or instruction, whether the quality be apparently inherent or culturally imposed. *E.g. natural history specimens or archaeological objects.*

3a) What type of object has been preserved?:

For this box select the letter next to the term that most closely fits the object's description and write it in the box. The second, bracketed box can be filled if there seems to be a strong secondary function.

In the large box write the details, where known, of the object's name and approximate date.

F = Functional: An object that primarily serves a utilitarian purpose – a useable artefact. *E.g. furniture, tools or buildings.*

C = Cultural: An object that possesses symbolic value related to those denoted in the "cultural" section of the previous category set. *E.g. Bishop's crosier, the Budget case or a flag.*

R = Commemorative: An object that has been designed to evoke a past event or person and is imbued, therefore, with contextual significance. *E.g. pilgrim badges, commemorative stamps, plates or coins.*

A = Aesthetic: An object with the primary function of pleasing the senses that has not been specifically designed to belong within the group of cultural objects or commemorative objects. *E.g. painting or sculpture.*

3b) What materials does the object comprise?:

Select up to 5 materials from the list (bold type) below, placing the material with the greatest volume first, ending with the material of smallest volume.:

Ag – Silver
Au – Gold
Cu – Copper alloy
Fe – Iron
Pb – Lead
Sn – Tin, Pewter
Mm - Modern metals (Al, Pt, Zn etc)
Ce – Ceramic
Gl – Glass
Ve – Vitreous material, Enamel
Pp – Plastic, Polymer
St – Stone
Ip – Ink, Pigment, Dye
Lq – Lacquer
Pa - Paper
Tx – Textile
Ba – Basketry, Grasses, Leaves
Bo – Bone, Ivory, Shell, Antler Horn
Fr – Fur, Hair, Feathers
Lh – Leather, Hide
Wo - Wood

3c) What deterioration is evident?:

After observing the object try to describe the deterioration evident by selecting the letters for the term (in bold) that most closely describes the condition. If it is possible to determine if the deterioration occurred either pre- or post-conservation, place the letters in the appropriate box (1st or 2nd box). If the deterioration sequence cannot be determined, place the chosen letters in the last box.

ND = No deterioration: There is no visible deterioration apparent.

SD = Superficial damage: There might be surface damage and/or minor structural damage, such as limited cracking, small losses or minor weaknesses and minor biological attack or chemical changes.

MD = Moderate deterioration: Visibly obvious surface and/or structural damage, such as relatively extensive cracking, losses, weaknesses and biological attack or chemical changes.

ED = Extensive deterioration: Extensive surface and structural damage, such as major cracking, losses, weaknesses and biological attack or chemical changes.

DD = Deliberate "damage": Damage that has been instigated deliberately, be it as an act of veneration towards the object or as an act of vandalism.

4) Who conserved the object?

This section describes the party undertaking conservation work. For the small box select the letters next to the term that most closely describes the worker.

In the large box supply details, where known, of the name of the worker(s) and the approximate date of the work.

SB = Skilled "believer": The worker has received some formal training in preservation/conservation and subscribes to the cultural mores of the society by whom the object is held. This is reflected in the techniques employed. *E.g. conservator.*

UB = Unskilled "believer": The worker has received no formal training in preservation/conservation, but subscribes to the cultural mores of the society by whom the object is held. This is reflected in the techniques employed. *E.g. native public.*

SNB = Skilled "non-believer": The worker has received some formal training in preservation/conservation, but does not subscribe to the cultural mores of the society by whom the object is held, although they may acknowledge the social systems. Acceptance or denial of cultural mores may be reflected in the techniques employed. *E.g. craftsman.*

UNB = Unskilled "non-believer": The worker has received no formal training in preservation/conservation, but does not subscribe to the cultural mores of the society by whom the object is held, although they may acknowledge the social systems. Acceptance or denial of cultural mores may be reflected in the techniques employed. *E.g. general public.*

5) What balance of techniques has been used to preserve the objects?:

This section is based on evidence that can be seen or extrapolated from the object/records.

In the box next to each letter supply the number that most closely describes the level of conservation work administered.

I

0 = No investigation or analysis undertaken. No evidence of action taken of an interventive or analytical nature.

1 = Simple investigation and/or analysis undertaken. There is evidence that the object might have been analysed visually and have undergone simple wet chemical and/or mechanical tests to establish material identification/condition. *E.g. early conservation practice.*

2 = Extensive and detailed investigation and/or analysis undertaken. There is evidence that the object might have been analysed with more powerful forms of visual analyses, such as SEM/X-rays. Material analysis might have been attempted with techniques such as FTIR/EDXRF. Tests for treatment suitability will almost certainly have been. *E.g. modern conservation practice.*

R

0 = No recording undertaken. No evidence of records of any description.

1 = Rudimentary records made. There is evidence that notes might have been made describing the work carried out, mentioning materials used, but not necessarily the quantities, concentrations or duration of treatment. There might be a simple sketch to accompany the notes. *E.g. early conservation practice.*

2 = Extensive and detailed records made. There is evidence of detailed records kept that describe and quantify the treatment methods employed, along with descriptions pertaining to the condition and composition of the object. The details are often accompanied by an annotated diagram and/or photographs and, where appropriate, X-ray plates. *E.g. modern conservation practice.*

C **0 = No cleaning undertaken.** There is no evidence that cleaning of any description has been undertaken.

1 = Some cleaning undertaken. There is evidence that partial or selective cleaning, by chemical or mechanical means, of corrosion products and accretions has been undertaken. *E.g. treatment of archaeological ironwork.*

2 = Extensive cleaning undertaken. There is evidence that the object has been fully cleaned or almost fully cleaned of dirt, corrosion products and accretions, by chemical or mechanical means. *E.g. washed textiles.*

A **0 = No interventive treatment administered.** There is no evidence that interventive treatment of any description has been undertaken.

1 = Repaired to stabilise the condition of the object. There is evidence that minimal intervention has been employed to stabilise the object and minimise further deterioration. This might involve chemical or mechanical means. *E.g. the reassembly of broken ceramics.*

2 = Restored to working order or to emulate original appearance. There is evidence that chemical or mechanical treatment has been undertaken to enable the object to be restored to working order and/or original appearance. This might entail the inclusion of new materials. *E.g. a fully restored ceramic vessel.*

3 = Altered beyond original form or function. There is evidence that the object has been changed in such a way that it no longer resembles its original form and/or function. This will probably have entailed the introduction of new materials to the object. *E.g. the addition of unauthentic-looking limbs to broken statues or objects re-used in a non-original manner.*

P **0 = No preserving action undertaken.** There is no evidence that action specifically designed to cause the object to be preserved has been undertaken.

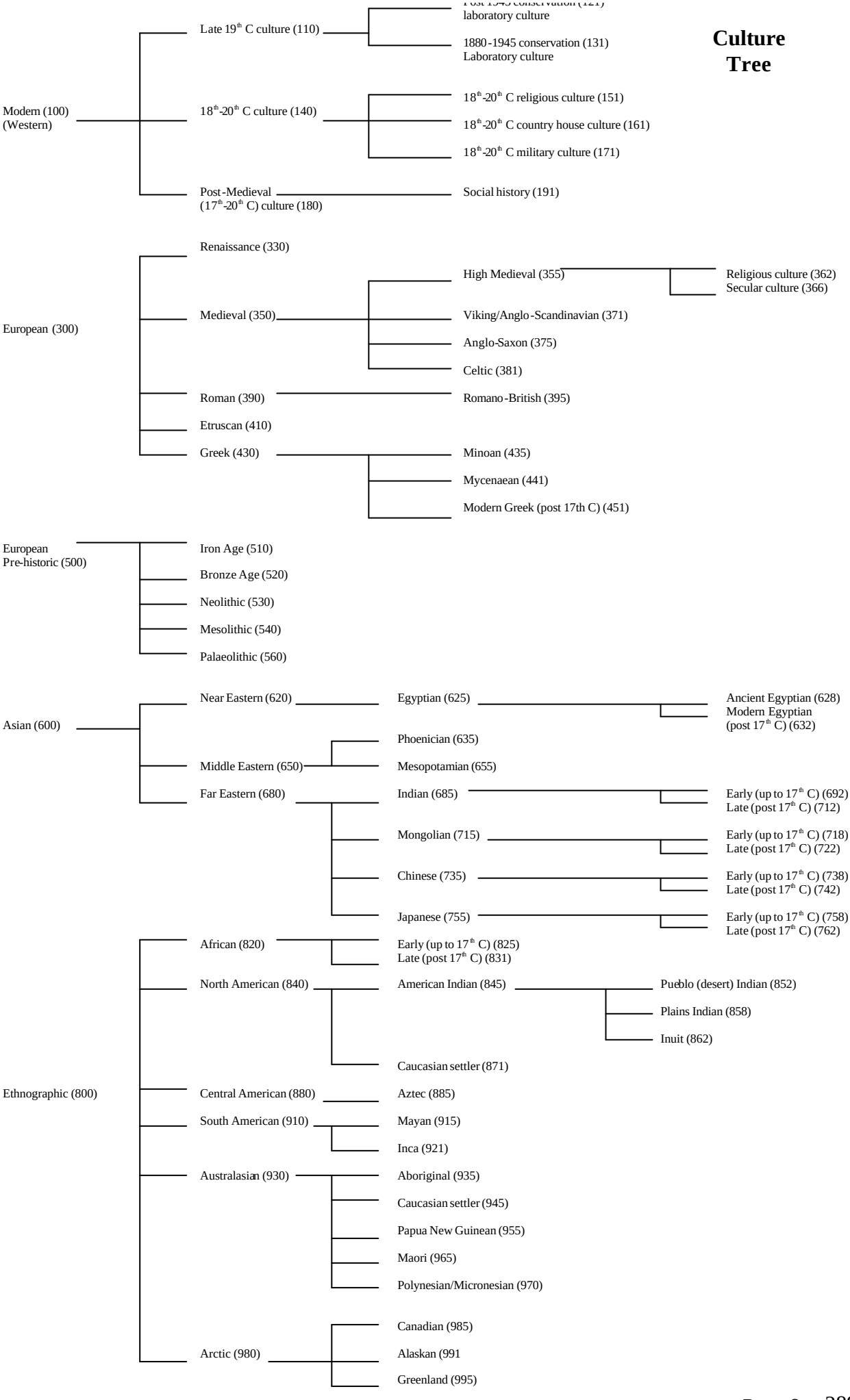
1 = Object stabilised through removal of environmental/physical threats. There is evidence that the physical/ambient environment of the object has been altered, either pre or post conservation, to achieve the cessation of deterioration. *E.g. objects boxed and housed in library/museum.*

2 = Specialised storage system designed for object. There is evidence that a container or chamber has been provided as part of a physically/environmentally controlled environment, either pre or post conservation. *E.g. a box/chamber is fashioned especially for the object and placed in library/museum.*

6) **What is the occupation of the person filling out the form?**
There is a choice of three occupational groups. Select the one regarded to be most appropriate and place a tick in the box next to the chosen category.

7) **Other notes:** This box provides the form-filler with an opportunity to add additional comments/information that are thought to be relevant, but do not belong in any of the other boxes. This box can be left blank.

Culture Tree



APPENDIX 10 – TABLES OF CONSERVATION RESULTS BY CULTURE

The total number of object groups represented by the whole database is 671.

The total number of conservation episodes represented by the whole database is 677.

Cultural groups conserved by Conservation Laboratory Culture 121					
Cultural Group	**Number of recorded conservation episodes**	**Cultural Group**	**Number of recorded conservation episodes**	**Cultural Group**	**Number of recorded conservation episodes**
Medieval	232	Middle Eastern	3	Medieval religious	1
Romano-British	91	Ancient Egyptian	32	Renaissance	4
Aborigine	1	Egyptian	1	Medieval secular	16
Maori	5	Near Eastern	25	Social History	28
Polynesian / Micronesian	1	Asian	3	European post-Medieval	32
South American	1	European Bronze Age	4	British Military	1
African (post C17th)	1	European Iron Age	1	European Country House	4
Ethnographic	1	Greek	4	C18th– C20th Religious	4
Chinese (post C17th)	17	Roman	4	C18th– C20th Modern (Western)	28
Chinese	3	Anglo-Saxon	5	Late C19th Western	8
Indian (post C17th)	2	Viking/ Anglo-Scandinavian	1	**UNASSIGNED**	9
Indian	1				

The total number of object groups conserved by Conservation Laboratory Culture is 572.

The total number of conservation episodes undertaken by Conservation Laboratory Culture is 574.

Cultural groups conserved by Regimental Culture 171		
Cultural Group	**Number of object groups conserved**	**Number of recorded conservation episodes**
Regimental Culture	21	21

Cultural groups conserved by Roman Culture 390		
Cultural Group	**Number of object groups conserved**	**Number of recorded conservation episodes**
Roman	22	22
Greek	1	1

Cultural groups conserved by Ancient Egyptian Culture 628		
Cultural Group	**Number of object groups conserved**	**Number of recorded conservation episodes**
Ancient Egyptian	20	20

Cultural groups conserved by Native American Culture 845		
Cultural Group	**Number of object groups conserved**	**Number of recorded Conservation episodes**
Native American	18	18

Cultural groups conserved by Maori (965) & Australian Aborigine (935) Cultures		
Cultural Group	**Number of object groups conserved**	**Number of recorded conservation episodes**
Aborigine	1	1
Maori	4	4

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