

re:SOURCE

The Council for **Museums, Archives and Libraries**

**The Oxford and Cambridge
University Museums: A Global
Contribution to Widening
Knowledge and Deepening
Understanding**

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Introduction

The focus of the paper is to explore the existing activity related to modern approaches to the delivery of museum services; the extent to which the university museums are actually engaging in government priorities (learning, access, and social inclusion) and their willingness to develop further in these areas. In this case, government priority areas are interpreted as widening participation and access, as social inclusion can be captured within these activities.¹

It follows on from an earlier generalised analysis, 'English Regional Museums Study', (Roodhouse, 2001 unpublished) commissioned by Re:source, where senior local authority executives and senior managers from the Cambridge and Oxford universities explained their institutional attitude to the university museums in their care.

A survey of university museums and collections undertaken by the South Eastern Museums Service in 2001, which formed part of a national survey funded by the former Museums and Galleries Commission, provides a constructive initial context:

'Today, it is no longer accurate to portray all UK HEMGCs¹ as insular and academic, lacking any commonality with their counterparts amongst national, local authority and independent museums. Instead the survey has witnessed a period of increased integration of university and college museums within the UK museums community. One discernible indication is that 90 HEMGCs are now recognized by the UK museums registration scheme administered by Re: source, the Council for Museums Libraries and Archives. A total of 16 university museums and galleries have successfully sought Designated status, which offers access to new funding opportunities from the Designation Challenge Fund supported by the Department of Culture, Media and Sport (DCMS). Equally, a discernible change has taken place in the ideology and outlook of many of HEMGCs during the last decade. Many which have their roots in teaching and research, no longer see these activities as the exclusive priority. University museums in varying ways have increasingly sought to serve wider audiences: through exhibitions and permanent displays, and through education and public services.'

(From: A Review of Museums and Collections of Higher Education Institutions in the Eastern Region and the South Eastern Region of the South Eastern Museum Service, Arnold–Foster and Weeks, 2001)

Similarly, the Report 'Using Museums, Archives and Libraries to Develop a Learning Community, a Strategic Plan for Action' (2001, Re:source) provides an additional and contemporary conceptual framework for university museums. The relevant key aims of the plan are:

- i. To put learning at the heart of what museum, archives and libraries do;
- ii. To demonstrate the impact that learning in museums archives and libraries can have on educational attainment and on the quality people's lives;
- iii. To increase the number of people using museums, archives and libraries to support their learning;

¹ Higher Education Museums Galleries and Collections

- iv. To promote new and innovative ways of interpreting collections and resources, which demonstrate the range of approaches through which, museum, archives and libraries can support learning and which make effective use of new technologies;
- v. To develop more effective ways of using digitised collections to support learning.

There is an expectation that by 2005 this plan will demonstrate the experience of interacting with the collections and resources of museums, archives and libraries in a planned and structured way, impacting on:

- i. Attainment levels of students in the formal education system
- ii. Drawing people back into formal learning
- iii. Development of skills, self confidence and motivation
- iv. The quality of people's lives and their involvement with society.

A general observation of this, and of government policy in this field, is the focus on school education with a consequent marginal reference to the post 16 yrs system, (including further and higher education). This seems at odds with the Department of Education and Skills (DFES) policy, to improve access and widen participation in higher education by engaging 50% of 18 to 30yrs olds who are eligible to enter higher education by 2010.ⁱ

In other words, there is a limited view of access and widening participation at play which may be characterised as encouraging more young people, ethnic minority groups and those from socially excluded backgrounds, including the lower socio-economic groups, to participate in museums. An alternative view, that recognises the diversity of museums as a whole and the broad spectrum of communities they serve, deserves consideration. It is the national sum, not the parts, of museums, which deliver comprehensive access and widening participation to diverse communities. This approach recognises the individuality of mission (richness in diversity), and avoids a crude 'one fits all approach', with the new test becoming fitness for purpose. This also suggests a thorough understanding of the constituencies individual museums choose to serve, informed by their aims and objectives. Professor David Phillipson, Director of the Museum of Archaeology and Anthropology, University of Cambridge, in his Inaugural Professorial Lecture 'The Trouble with Museums' (2002), develops this argument:

'Museums in Britain today are extremely diverse: this is a strength not a weakness to be eliminated through ill-considered pressures for uniformity of purpose'.ⁱⁱ

This interest in access and widening participation is embedded in the history of museums and galleries, as Giles Waterfield (Palaces of Art, Art Galleries in Britain, 1790 – 1990, Waterfield, 1991) points out:

'The galleries formed by the proudly civic-minded collectors (of the 19th century) of contemporary art were frequently accompanied by statements of the desirability of educating the masses and of giving them the opportunity to appreciate the possibility of a better life through the medium of art.'

Waterfield illustrates this by referring to the Manchester Art Museum at Ancoats on the fringes of central Manchester.

‘The Ancoats Museum did not contain elevated or expensive works of art: it was intended to allow the population of a gloomy and deprived area an opportunity of glimpsing through the medium of drawings, photographs and casts - in other words, reproductions (the new technology) - the possibility of a more beautiful and sensitive existence than the one to which they were condemned.’

Waterfield goes on to speculate that this philanthropic activity can be traced into the early 20th century with the development of didactic museums and galleries such as the Harris Art Gallery, Preston. He suggests that visiting a gallery today is perceived as a largely middle-class pursuit; it is hard to appreciate the enormous popularity of museums from around 1870 into the early twentieth-century, particularly in cities such as Sheffield, Birmingham and Glasgow with visitors drawn from all walks of life.

Phillipson, in ‘The Trouble with Museums’ summarises these concerns:

‘Both bodies (DCMS and Re: source) are very properly concerned that as many people as possible should have access to museums, whose potential contributions to life – long learning and to the tourist trade are rightly stressed. Neither contribution, however, will be realised unless museum collections are properly researched, interpreted and understood.’

Background to the University Museums

There is recent published literature on the specific subject of university museums and the role of heritage in universities, which provides a useful general background to this paper. (The Heritage of European Universities edited by Nuria Sanz and Sjur Bergan, Council of Europe, 2002 and the Jornadas De Museos Universitarios combined volumes 1 and 2 edited by Antonio Ramos Hidalgo, Universitat d’Alacant, 1999.) In particular, a paper by Christopher White in the Jornadas De Museos Universitarios, ‘The Ashmolean And Its Collections’ provides a helpful historical perspective of a major international university museum.

There is also a helpful contribution by Professor Patrick Boylan, ‘The evolution and role of university museums and their interactions with their universities, (Universities, Past, Present and Future, Museum Management and Curatorship, vol18, no.1, pp43 – 56). However this study is focussed on the museums at the Universities of Cambridge and Oxford. Both Cambridge and Oxford Universities hold some of the oldest internationally significant collections in the Humanities and Sciences in the United Kingdom, which are formally recognised as nationally important through the Designation Scheme operated by Re:source, and supported by the Department of Culture Media and Sport (DCMS).

There are generally two types of museum in the universities, which are:

- i. Departmental museums, which form a constituent component of a Department, School and/or Faculty
- ii. University museums classified as University Departments.

Examples of these types are, The Ashmolean Museum, University of Oxford, (University Museum), the Museum of Earth Sciences, University of Cambridge, (Departmental Museum) and the Museum of the History of Science, University of Oxford (Departmental Museum).

The two University governance and policy structures vary in detail and emphasis between Oxford and Cambridge, but are essentially models of devolution within a federated environment. In the case of Cambridge, there is the University Museums Policy Statement, which is validated by central University bodies. The University Council and General Board have oversight in relation to the policy statement and each museum has separate operational statements that realise the policy statement. Museums are cost centres (the Fitzwilliam/Kettle's Yard), but those museums embedded in Departments are part of the Department cost centre arrangements. Similarly, Oxford ensures that decision-making is devolved down to the most appropriate levels within a framework of central direction and accountability through the corporate plan. The Academic Services and University Collections (ASUC) forms the corporate grouping, loosely comparable to the other University academic divisions (of which there are five) and includes the museums together with other infrastructure such as buildings and estates and administration. ASUC costs including museum costs are charged to the five academic divisions.

1. University of Cambridge

At the University of Cambridge, there are eight museums; the Fitzwilliam Museum, the Museum of Archaeology and Anthropology, the Museum of Earth Sciences, the Whipple Museum of the History of Science, then University Museum of Zoology, the Museum of Classical Archaeology, Kettle's Yard, the Museum of the Scott Polar Research Institute, and the collections held by the Botanic Garden and Herbarium, of which five are Designated collections. The University Council is directly responsible through Syndicates for Kettle's Yard and the Fitzwilliam Museums; other museums are accountable through the General Boards of Faculties (joint boards) to the Council. There is limited regular financial support from the local authority with core revenue support drawn from the University, the Arts and Humanities Research Board (AHRB)ⁱⁱⁱ, Re:source (Designation) and commercial activity. Questions of physical access to the museums have been addressed and continue to be improved.

The University supports the museums in its care because they provide:

- i. A major foci for University teaching and research;
- ii. A valuable research and educational resource locally, nationally and internationally;
- iii. An unrivalled opportunity to present the University's work to a wide audience;
- iv. An over-riding duty of care for its collections, to the highest possible standard and, where appropriate and within the resources available, to augment them;
- v. Some of the oldest museums in the country;
- vi. To demonstrate what research and teaching is capable of delivering;
- vii. To provide active education programmes;
- viii. To maintain the diversity and independence of the museums.

[Note from English Regional Museums Study, Roodhouse (unpublished), 2001]

In particular, the University stated policy is:

'The university museums are major foci of university teaching and research. They are also a valuable research and educational resource locally, nationally and internationally. They also provide an unrivalled opportunity to present the university's work to a wide audience.

The university recognizes that collections of its museums represent major components of the national and international heritage. It acknowledges the duty to make these collections available as widely as possible without compromising the museums functions in university teaching and research.

Subject to limitations noted in the previous paragraph, the university will:

Encourage access to its collections and the documentation by bona fide researchers;

Use its best endeavors to maximize public access to the collections;

Support national and international organizations working to develop museum interests;

Seek to make items from its collections available for loan to appropriate institutions throughout the world;

Within the existing framework and in collaboration with other bodies make particular efforts to enhance museum facilities in the City of Cambridge as a resource for lifelong learning and cultural recreation in the region.'

[Extract from University of Cambridge Museums Policy Statement, published in the Reporter, 2000]

Specifically, the museums are expected to deliver, on behalf of the University:

- i. A good relationship with the teaching and research activities within the University;
- ii. Access to the public;
- iii. Conservation;
- iv. Further development of the collections;
- v. Annual reports, which reflect the Policy Statement (each Museum reports according to governance).

All the museums are compliant with University policy and strategies such equal opportunities.

2. University of Oxford

In the case of the University of Oxford, there are five major collections; the Oxford University Museum (National History Museum), the Ashmolean Museum, the Museum of the History of Science, the Pitt Rivers Museum, and the Botanic Garden (the oldest Botanic Gardens in the UK). The first four collections mentioned are nationally designated. Apart from these museums, other collections in the University include History of Musical Instruments (Music Department), and the Christchurch College Collection (College funded). Visitors (committees for each museum) and a Committee for Museums and Scientific Collections (CMSS) govern the museums. The museums operate a free access policy, apart from the Botanic Gardens and receive little financial support from the local authority. In all cases these museums have addressed the physical barriers to access.

The University supports its museums for historical reasons:

- i. The Ashmolean Museum was the first public museum in the UK;
- ii. The international significance of the collections;
- iii. The Museums are in trust, and are used for teaching and research.
- iv. The University reaches out to the community by making the Museums accessible to the city and the region.

[Note from English Regional Museums Study, Roodhouse, (unpublished) 2001]

In particular the role of the museums are succinctly described in the University Corporate Plan as:

‘The university will continue to maintain and develop the collections as:

A focus and resource for research and teaching and collection based scholarship across the university;

A research resource for a wide range of external scholarly users, nationally and internationally;

An educational resource for schools and for other tertiary education institutions;

A catalyst for lifelong learning and cultural creation in the immediate region, and for national and international visitors;

A focus for commitment and interaction between the University and the public especially in the local area;

An active contributor to the cultural and economic development of the region’.

[Extract from the draft (unpublished) University of Oxford Corporate Plan, 2001]

The two university museums collectively relate to the widening participation, social exclusion, neighbourhood renewal, job generation, and skills development agendas by contributing to the local economy, and participating in local and sub-regional initiatives. Examples include skills internships, professional level training and development, and programmes for partially sighted people. In particular, the museums contribute locally, regionally and internationally, to realising the outreach policy of each University.

Aims and Objectives of the University Museums

Given the general description of the university attitude towards the museums in its care, particularly the emphasis on research, teaching, preservation and dissemination, it is to be expected that this be reflected in the aims and objectives of the museums. For example, the University Museum of Zoology, Cambridge, a Departmental Museum, is a non-profit distributing institution owned and governed by the University of Cambridge. The museum exists:

- i. ‘To collect, document and preserve zoological material and associated artefacts;
- ii. To play a primary role in the education of undergraduates and to provide research resources for bona fide research workers, within the university and outside it, nationally and internationally;

- iii. Simultaneously, to make its exhibition galleries available to a wider public, especially to schools;
- iv. To provide interpretive displays to allow visitors to appreciate the nature and significance of authentic material on exhibition;
- v. To draw upon its well-documented records to provide associated information relating to the acquisition and history of the objects displayed.'

[From: 'Statement of Purpose and Key Aims', (unpublished note, University Museum of Zoology, University of Cambridge, 2002)]

These aims are interpreted as objectives, and in the case of research, include; attracting outstanding researchers to the Department and museum, continuing to support affiliated researchers, providing the best possible service for external researchers using the collection both as visitors and remote users and finally maintaining and extending links with interdisciplinary research groups within the university, and external bodies with cognate interests. Similarly, the objectives for teaching, include maintaining both introductory and specialist undergraduate teaching using museum resources, supporting teaching in other departments of the University and other local institutions, and the investigation of possible web-based teaching Initiatives as well as forming teachers' packs and handling collections for use by schools. The museum, therefore, aims to combine its role as a university research and teaching institution with providing public benefit.

This purpose is echoed in the Whipple Museum of the History of Science, University of Cambridge, Department of the History and Philosophy of Science, Statement of Purpose:

'The Whipple Museum of the History of Science collections include scientific instruments, models, prints, books and associated material relating to the history of science. The purpose of the Whipple Museum of the History of Science is to preserve, augment, display, interpret and provide access to collections, making them available for the purposes of study and research. Teaching plays an important part in the role of the museum within the Department of History and Philosophy of Science and the University.'

[From: 'The Whipple Museum of the History of Science, University of Cambridge, Forward Plan to 2000' (unpublished)]

The Ashmolean Museum, however, whilst maintaining the commitment to care and development of the collection through research and teaching, places greater emphasis on engagement with the public and the Director, Dr. Brown, described his Institution as:

'The Museum is the point at which the public meet the University'

[Extract from an interview 2001, (unpublished)].

The Fitzwilliam Museum, shares these values, with:

'A fundamental purpose to safeguard the collections, to make them accessible for the present and to preserve them for future generations.'

[Endorsed by the Meeting of the Fitzwilliam Museum Syndicate, professor Gareth Jones, Chairman, 10th June 1996 (Minute viii)]

It can be assumed from this that the departmental museums have a stronger orientation towards teaching, learning and research. This is unsurprising and consistent with their location, funding streams and purpose. The university museums (university departments) on the other hand have an equally important role to play in meeting University requirements for scholarship and teaching but are also expected to make a serious contribution to the University public profile and outreach policy.

Departmental Museums: Animated Material Culture

This paper focuses on three departmental museums, the University Zoology Museum, University Cambridge; The Whipple Museum of the History of Science, University of Cambridge; and the Pitt Rivers Museum, University of Oxford, with reference to other similar institutions. These institutions provide a balanced cross section of departmental museum types.

1. The University Museum of Zoology, Cambridge.²

Background

This is a classic example of a departmental museum, with an aim to provide support for teaching and research in the university, particularly the Zoology Department. The museum, a nationally designated collection^{iv}, free to all, contains collections to rival those of the major university museums worldwide. They are housed in a modern building providing more than 1000 square metres of environmentally controlled gallery space together with purpose-built stores workshops and research areas. On average the museum receives around 29,000 visitors per annum with over 137 booked school groups covering schools, further and higher education as well as Language schools. Over the last six months of 2002, there has been an average website hit per month of 6,500.

The collection is significance for birds (600 specimen types), molluscs (100,000 lots and 200 types), and insects with over 650,000 specimens and more than 1000 types. Other collections of scientific interest are the early tetrapod fossils, the Mesozoic mammals and the mammal-like reptiles and the monotremes and marsupials. The museum is an integral part of the Department of Zoology and the Director reports to the General Board of the University via the Head of the Department and the Council of the School of Biological Sciences. Resources for the museum including dedicated staff salaries are provided through the Needs Committee of the School of Biological Sciences as part of the overall allocation to the Department of Zoology, however the funds are accounted for separately and earmarked for the museum.

The dedicated academic staff of the museum are all required to teach, and expected to carry out research in their areas of expertise. There are in addition 11 research students and a further 5 research staff currently associated with the museum. The technical support staff are employees of the university, and accountable to the Director in realising the aims and objectives of the museum.

Public access to the collections is during normal working hours with no opening at the weekends and throughout university terms the gallery is in regular use for university teaching. At these times public access is not advertised, however the museum is open to the casual visitor or school and other groups by arrangement. The museum provides disabled access to all major display areas.

² The sources for this section are; Statement of Purpose and Key Aims (unpublished); the Forward Plan, 2001/02 – 2005/06 (internal University document); AHRB Application 2001(unpublished); and the Designation Application, (unpublished).

Learning

A major purpose of the museum is to support undergraduate teaching and six departments teaching in the natural sciences Tripos use the collections. This teaching takes a number of forms. First-year students are required to review displays as part of the basic course in biodiversity. Further teaching is carried out in front of the museum displays making particular use of the mounted skeletons.

Supervisors take their students into the museum during tutorial sessions to discuss the displays directly. Final-year undergraduate courses use the museum intensively and undergraduate research projects form an important part of the final-year degree courses.

Consequently the permanent displays are designed to support the teaching needs of university courses. A rolling display of specimens laid out in the museum demonstration room, changed three times weekly, and involving a total of more than 850 specimens, including many unique fossils, supports this. This demonstration room combined with the laboratory are particularly important assets to a museum with strong teaching, scholarship and research aims and objectives.

The museum academic staff are accountable for their teaching and learning activities through the normal quality assurance regimes within the department and university, thus indirectly answerable to QAA. Staff of this museum and the neighbouring Museum of Earth Sciences are, for example, directly engaged in teaching modules in vertebrate evolution and mammalian evolution.

Other higher education providers within Cambridge frequent the museum. In particular the biodiversity and conservation course at Anglia Polytechnic University accesses the collection to introduce students to a range material they would otherwise not experience. Non-science students also engage with the collection, such as University of Cambridge Architecture students and photography students from Cambridge Regional College, as well as art students who use the specimens for life drawings and visual sources.

Research activity

The museum is a centre of excellence for research, particularly in ornithology and vertebrate evolutionary biology. Continuing research in the museum provides a major source of new accessions. Recent examples include fossils of the earliest land vertebrates, and molluscs from the Channel Tunnel borings, documenting the effects of climate change in Europe over the last 10,000 years. The high level of research activity explains why the documentation in the museum is of such a high quality for most of the specimens, however these are yet to be completely converted to a digital format. This places limitations on access to the material through the Internet for international researchers.

The bulk of the collections or collections related research is carried out by the permanent staff, research students based in the museum, and by researchers in the biology departments of the university, as well as external researchers who visit Cambridge or who borrow material from the collections. The museum academic staff, as members of the university academic community, contribute to the Higher Education Funding Council for England, Research Assessment Exercise.^v A good measure of the level of this activity can be found in the publications, which acknowledge the use of the museum collections. It should be noted however that although curators of the museum maintain their own research programmes in

association with a group including research students, not all of this work relates directly to the collections.

Schools and the Wider Community

The museum works closely with schools, by supporting the National Science Week and Museums Week initiatives as well as participating in the university MAGIC^{vi} scheme. This was an interesting scheme, which was initiated by the Fitzwilliam Museum Education Service and largely funded by Cambridgeshire County Council to combine and co-ordinate the educational activities in museums and galleries in Cambridge. A cohort of selected volunteers has been trained under the scheme to interpret the Cambridge museum collections for school groups. Two trainees, including one of the museum research students are working specifically with the zoology collection. There has been a high demand for the sessions delivered by the volunteers. The museum also serves education by helping to make natural history information available in a popular format. It has assisted with the production of popular science books such as a Dorling Kindersley, Eyewitness guides for children, and two amateur field guides such as the Collin's Field Guide to mammals. There is a limited resource base for school activity (with project funding acting as an uncertain source of support), which constrains development. In addition there is a shared Outreach Officer (for the four scientific museums) appointed in April 2000 with National Heritage Lottery Funds. The purpose of the post is to promote the public face of the museums and develop audiences. This has already generated benefits such as a series of talks on current research and thinking in the museum disciplinary fields.

Internet Access^{vii}

The Internet is increasingly used as a source of information for students in schools and universities. This is recognised by the museum with participation in projects such as, the 'Tree of Life', an organised distributed database maintained by experts throughout the world who contribute web pages on their own favourite organisms. These pages provide information in a context, which can easily be explored by the naive user, but reaching a depth that is useful for the serious researcher. The staff of museum currently maintain two sections of the 'Tree of Life'.

The international community accesses the museum primarily through the website if they are unable to visit Cambridge. Given the quality of the documentation surrounding the items in the collection, and an ongoing programme of digitisation the website is becoming more important to the museum as an access, learning and research tool.

Observations

The museum is clearly meeting its mission of providing high quality research, learning and scholarship with and for the University community whilst caring, maintaining and developing the collections. It is also an accessible institution, free to all, widening participation by working with the other university museums to encourage school group involvement and contributes through its activities to the better understanding of science by non-scientists. The approach to the collections and the level of sophistication evident in the teaching facilities is a powerful model for other museums sharing a similar mission. It can be summarised as being, curriculum responsive and research active with an explicit dissemination programme.

The museum has focussed on the university community (which is consonant with its purpose), but could given additional resources expand the present engagement with the formal; school structure particularly post 16 yrs including further education and other Higher Education Institutes, through the provision of curriculum specific aids for students and staff and tailored research notes.

Similarly, the model of curators and the museum Director functioning as recognised university academic staff, accountable for their research and teaching activities, both to the university and to the museum committee is one that other institutions with internationally significant collections and a commitment to research and scholarship may wish to consider.

It should be noted that these activities are achieved on a small revenue budget with limited staff resource base, largely provided by the university.

The Museum of Earth Sciences, and the Museum of Archaeology and Anthropology, University Cambridge, are similar to this museum in structure, purpose, visitor profile, and relationships. However, the Museum of Earth Sciences has long established links with the community outside the university and uses the collections not only to meet departmental teaching and research needs but also for wider educational purposes including providing handling and loan specimens. There is space in the museum to accommodate groups, supported with handling trolleys and teachers packs. In addition the museum staff have designed a discovery trail, touch tours, flip books and handling sets. This museum like others in the University participates in National Science Week and has an established Friends organisation and volunteer groups including teachers and access groups that work with the museum staff to develop projects.

2. Whipple Museum of the History of Science, University of Cambridge³.

Background

The Whipple Museum, established in 1944, is a small, internationally significant collection, nationally designated, incorporates scientific instruments, and apparatus, models, pictures, prints, photographs, books and associated material relating to the history of science from the medieval period to the present day. These collections are particularly strong in material dating from the 17th to the 19th centuries. Instruments by English makers form the greater part of the collection. There are many sundials by continental, particularly German makers as well as an interesting series of microscopes of continental manufacture. Instruments of astronomy, navigation surveying, drawing, calculating, sundials, mathematical instruments, telescopes, microscopes spectroscopes, teaching instruments and early electrical apparatus are well represented.

The purpose of the Whipple museum as mentioned earlier, is to preserve, augment, display, interpret and provide access to these important collections, making them available for purposes of study and research. Consequently, teaching plays an important part in the role of the museum within the Department of History and Philosophy of Science - a centre for internationally renowned scholarship - and the wider university.

³ The sources for this section are: The Forward Plan to 2000 (unpublished); The Annual Report, to the Department 2002 (museum document); Application for Core Funding HEFCE, 2001, (museum document)

The Board of History and Philosophy of Science of the University of Cambridge govern the museum and the museum committee provides advice and support for the work of the museum. There is a small annual revenue budget from the university and an equivalent sum is raised through sales of publications, postcards and posters as well as donations and grants.

As a university museum, the students and staff of the university are the primary audience with the museum attracting over 5000 visitors a year, 40 organised school and specialist groups and 25 serious research visitors in 1999/2000. The opening times for the museum are limited to Monday to Friday, from 1:30 to 4:30pm by lack of staff. The museum galleries are wheelchair accessible, through the use of a lift, and entry to the museum is free.

The Curator and curatorial staff are members of university academic community within the Department whilst support staff, the Collections Manager, and part time museum attendant, (and casual and volunteer staff who approximate the equivalent of one full-time employee) are provided to assist the Director by the university through the Department.

The statutes and ordinances of the university make clear that the Director/Curator's role is also educational. The Director/ Curator lectures to undergraduates on the history scientific instruments, models and tools as well as the material culture of the scientific enterprise and the history of collecting scientific objects. Several other members of the Department also lecture regularly on the material in the collection.

Learning

Currently, the museum provides an important focus for university teaching through a Teaching Gallery named Discover refurbished in 2001 with Designation Challenge Funds which displays objects discussed in lectures referred to in reading, and incorporated in assignments, supported by access to information from the database of the entire Collection. The Teaching Gallery, Discover, showcases the breadth and depth of the museum holdings and facilitates access to a significantly larger percentage of the collections than would typically be displayed in most museums. This approach, places objects on display through the use of special cases that include draws designed to assist in teaching and research. The Teaching Gallery provides the key resource facility to the only undergraduate programme connected to an internationally respected collection in the history of science. Another gallery is devoted to 18th century Cambridge Science, and was designed to link closely to second and third-year undergraduate teaching.

In addition, an electronic teaching resource for the history of astronomy, *Starry Messenger* is available on the museum website and makes use of the museum resources. It is primarily a teaching tool for undergraduates, and other visitors to the website have reported its usefulness. *Starry Messenger* incorporates images and information about various holdings within the museum and library and is accessible from a number of computer terminals within the Department, and Graduate Student Information Technology Facility. It is also available to visitors, students, staff and researchers on a computer terminal in one of the museum's galleries.

Student exhibitions offer undergraduates as well as postgraduates an opportunity to learn about the work of museums. An example of this, the series of changing displays, 'Case Studies' brings the work of the Department into the museum. Working with the Collections Manager and Curator, students and staff are given the opportunity to present their knowledge and interpretation of material from the

museum's collection. 'Case studies' have included Anna Maerker, in 'A Century of Use, explores the continued use of 19th century anatomical teaching models incorporating models from the Zoology Department. Dr Klaus Staubermann, provided a case study display in 'Reworking Scientific Practice', presenting work from his doctoral thesis and Dr Patricia Fara in 'Representations of Newton' challenged our acceptance of the way in which Newton is visually presented.

In-house training sessions on special topics are provided and external experts brought in as necessary. The museum also provides voluntary and paid work-experience for students, and members of the local community including those with learning disabilities interested in a museum career.

Recent and current PhD students provide undergraduate supervisions utilising the collections.

Research Activity

The museum plays an important role within the Department of History and Philosophy of Science, (which was awarded an RAE five-star rating, the highest) by Higher Education Funding Council for England (HEFCE) in the research assessment exercise. Over 33% of the publications submitted for assessment, including exhibition catalogues, papers and published versions of public lectures related to the collections and the material culture of science. In addition, the museum has published permanent collection catalogues nine exhibition catalogues and six exhibition monographs as well as a collection of public lectures, and numerous leaflets and guides. Being part of the Department, the museum is able to regularly draw upon the knowledge and expertise of respected specialists in the field. In addition both undergraduate and postgraduate students from the Department conduct detailed research projects on the holdings. Because the collection is widely recognised many specialists in scientific instruments from the United Kingdom, Europe and the United States visit and communicate regularly researching items in the collections and sharing information about related material. The rare book collection is regularly used for the purposes of research, including the preparation of teaching materials, largely due to the importance of introducing students to the history of philosophy of science and the history of medicine primary texts.

Schools and the Wider Community

The museum contributes to the wider community by improving the general understanding of science, by participating in activities such as the National Science Week, and working through the MAGIC scheme (referred to earlier). Open days are regularly held aimed at families and children supported by specific exhibitions and a public lecture programme. The museum shares an outreach officer originally funded by the Heritage Lottery Fund (HLF) with the Museum of Archaeology and Anthropology, the Sedgwick Museum of Earth Sciences and the University Museum of Zoology. The outreach officer appointed in March 2000, now supported by funds from the Designation Challenge Fund is expected to make the existing collections and displays of the four university science museums more accessible to the public and explain the role of the university museums generally. As part of this initiative, *Cambridge Discovery*, a series of informal public talks on the collections of scientific museums including cutting edge research relating to them for adults and older children has been instigated and proved successful.

Observations

This small museum has focused its attention on caring for the collection, improving documentation, developing and deepening the research and teaching function in the context of the Department. The active engagement of students and academic staff in utilising the collections and constructing displays combines curatorship and academic study to add to the understanding of the history of science and consequently provides a positive learning museum model. It is unashamedly a teaching and research museum working within an academic department effectively meeting the needs of a core audience of university students and staff. It achieves this, however, the restricted resource base hampers the objective of a wider engagement with the community.

The Museum of the History of Science, at the University of Oxford tells a similar story. This museum is concerned with the understanding of nature in other periods and other cultures and the techniques used to manage the material world in the past.

This is encapsulated in the mission, 'to be a national and international centre of excellence for research and teaching in the material culture of science and, through its collection of historic scientific instruments, a source of understanding and inspiration for visitors'⁴. It is also a nationally recognised collection and receives support from the ARHB. Unlike the Whipple Museum, the museum is a Department of the University of Oxford although the curatorial staff are academic members of the university and teach on the Master of Science course, reflecting the pattern in the departmental museums. The history of science, at Oxford, is taught through a collection of objects (a material culture approach) within the museum in common with the Whipple Museum approach. Interestingly this institution was the first, specifically designed as a museum in 1683 and has the best collection of early instruments in the world. It has a similar pattern of visitors to that of the Whipple Museum and has well-established educational facilities as a result of external funding.

3. Pitt Rivers Museum, University of Oxford⁵

This internationally respected museum was founded in 1884 when Lieutenant General Pitt Rivers gave his collection to the university. He attached two conditions to the gift, which were that a museum was built to house the collection and an individual appointed to lecture in anthropology. The museum, with over 425,000 items, nationally designated, displays archaeological and ethnographic objects from all parts of the world. There is also an extensive photographic and sound archive containing early records of great importance. Most of the objects are displayed typologically, that is grouped by form or purpose rather than by geographical or cultural origin. This is unusual and developed from the Pitt Rivers theories concerning the evolution of ideas. The purpose of the Pitt Rivers Museum is 'to celebrate human ingenuity and creative skill. It is committed to bringing its world-wide collections to public attention, encouraging the sharing of knowledge and inspiring deeper understanding amongst people of all cultures, ages, and abilities'. (Annual Report 2000 – 2001)

⁴ Extract from the University of Oxford, Museum of the History of Science, Introduction and Plan, 2002.

⁵ Sources for this section are: The Pitt Rivers Museum Annual Reports, 2000 – 2001 and 2001 - 2002 to the University Congregation; Application to AHRB for Higher Education Museums, Galleries and Collections, 2001 (unpublished museum document)

As a result, around 50% of the 425,000 items in the collection are displayed. The museum also holds some 60 collections of manuscripts and the Balfour Library specialises in cultural anthropology and museology. The museum operates on five sites, with the main museum a Victorian building entered through the University Museum of Natural History. It is acknowledged to be a cultural artefact in its own right, 'a museum of museums'. The Balfour galleries, which opened in 1986, currently house displays devoted to musical instruments and hunter-gatherers past and present. It is open to members of the public free of charge from 12.00 noon to 4.30 p.m. from Monday to Saturday, and from 2.00 p.m. to 4.30 p.m. on Sundays. Pre-booked educational parties are catered for from 10.00 a.m. to 12.00 noon on weekdays. Disabled facilities include ramps and designated routes through the collection as well as an audio guiding system. Over 123,000 visitors frequented the museum in 2000-1 and this increased to 139,000 in 2001-2 with 19,593 coming in booked educational groups, including language schools. There were 386 recorded research visits to the Museum during the year. Of these, 129 required material to be retrieved from the reserve object collections and 123 (of which 88 were from overseas) required material to be retrieved from the photographic and manuscript collections. The total number of recorded research enquiries dealt with by Museum staff was 1859. Of these, 800 were received by email, 499 by phone, 280 by post or fax, and 280 in person.

The website attracted 40,052 in 2002 from 26,863, an increase of 49%, on the previous year.

The museum receives around 50% of its core funding from the AHRB channelled through the university and the School of Anthropology (in which the museum is located) with the university contribution to core funding amounting to less than 25% of annual costs.

The museum collections are well documented and catalogued. The high quality of documentation stems from the fact that the majority of the museum's holdings of field collections are made by professional anthropologists and archaeologists or by interested amateurs with long experience in collecting and documenting. All the data from the Museum's original accessions books, recording donations, purchases, and loans since the Museum was founded in 1884, is on computerized databases which enables the Museum to provide rapid and detailed answers to enquiries.

The Director and curatorial staff are faculty appointments and academic members of the Schools of Anthropology and Archaeology. The curators, in particular are classified as 'lecturer-curators', and are heavily involved in teaching and research throughout the faculty with 50% of their time devoted to this. (They are accountable to the University for this activity meeting QAA requirements, and, contributing to the HEFCE research assessment exercise.)

Learning

Museum staff (the Director and lecturer-curators) contribute to the university undergraduate degrees in archaeology and anthropology, human sciences, geography and music, and to the graduate taught degrees in material anthropology and museum ethnography, the world of archaeology, anthropological archaeology, and social anthropology. They also contribute from time to time to the M.Sc., M.Phil. and D.Phil. students studying Social Anthropology, History of Art and Visual Culture, Archaeology, and Music. During the course of the year, Museum staff gave 47

University lectures and 525 seminars and tutorials. Students are encouraged to use the collections as bases for their dissertations and theses.

Other higher education institutions in this country and abroad have used the collections, through guided tours and talks by the museum staff, provision of bibliographic information; responses to questionnaires and students for whom the museum itself is an object of study; advice on curatorial and other museum related issues including repatriation and restitution.

The museum has direct responsibility for the delivery of degree programmes based in the premises on behalf of the School.

Research Activities

Over the last three years the museum staff have produced 120 publications including authored and edited books, exhibition catalogues, special issues of journals, articles in books, encyclopaedias, catalogues, journals, magazines and newspapers reviews. Members of staff have or continue to supervise over 40 D.Phil research students with an annual average of 10 –15 research students associated with the museum through the host School. Museum staff in 2002 attended 54 academic conferences and gave 34 papers.

An example of the level of activity is the award of £51,000 from the Arts and Humanities Research Board, given this year to a member of staff for his Pacific Pathways project. This innovative project entails asking a number of artists, scholars, and members of source communities to create their own virtual pathways through and beyond the Museum's web site devoted to the Forster collection of Pacific artefacts from Cook's second voyage (1772–1775).

In addition, the Museum continues an active programme of mounting smaller special displays relating to current research by members of staff, student art work inspired by the Museum, and installations by professional artists.

The museum is home to a research centre, which accommodates the photography and manuscript collections and the offices of most of the teaching staff.

Schools and the Wider Community

Many schools visit the museum, largely from Southern Britain, to make use of the collections both for core curriculum subjects, including primary history, GCSE, A-level art and design, and other miscellaneous projects. The use of the museum by schools is supported by the volunteer guiding service, which provides national curriculum linked guided trails for schools to follow. The museum has recently appointed, with Heritage Lottery funding, an Education and Outreach officer to develop the educational services which has included family activities at weekends and during school holidays as well as an education website. This ongoing programme of family activities runs every Sunday afternoon, throughout the year, staffed by volunteers. As well as proving very popular with visitors, it has been used as a route for very specific targeting of new audiences. This has taken the form of geographical targeting of poorer areas of Oxford and targeting non-English-speaking local residents.

The museum contributed to the *Campus 2000* summer activities for local children aged 7 to 14 years. Participants were given hands-on experience of being a conservator, including trips to the conservation laboratory to look at pests, poisons and the process of decay.

Specific exhibitions are mounted on a temporary basis throughout the year for schools.

With the appointment of the Education and Outreach Officer, extending the educative functions of the museum to schools is underway involving further engagement with the post 16 yrs curriculum. The expansion of this work, however, is dependent upon external project funding and raises the question of how the non-university attributed activities can be core funded in future to realise the wider commitment to the educative needs of the community.

Internet Access

The entire collection is available on the museum website which is used extensively by international researchers and viewed as an increasingly important research resource. It is a significant medium for making the collections internationally accessible. The site is also used to provide virtual impressions of the museum's special exhibitions.

A recent project undertaken by museum staff was the creation of a new website devoted to the collection of Pacific artefacts from Captain Cook's second voyage of discovery. This was a joint project involving the Museum and the Humanities Computing Development Team of the Humanities Computing Unit of the University. The site provides access to a comprehensive illustrated catalogue of the collection and information about the collectors and the history of the collection, an archive of related documents and links to other online resources.

Similarly, the education site meets the requirements outlined by teachers in a survey of school groups visiting the Museum carried out earlier. Teachers expressed a preference for a quick, no-frills site that gave fast access to materials to help plan visits and download teaching information. The resources are made available in formats to allow teachers to adapt the materials to their specific needs. Fact-sheets, prepared by members of the Museum's staff on specific areas of the collections, are also available online to meet another identified need of secondary-school teachers. Resources are now available across a range of subject areas for all key stages of the national curriculum.

'Virtual access' to the Museum and its collections also continues to be provided to many others via commercial filming in the galleries.

Observations

This museum is unique: as a collection; as a museum in its own right, and in its aim to bring collections to public attention by the sharing of knowledge, and understanding amongst people of all cultures, ages and abilities. This mission, perhaps less restrictive than other institutions (such as the Museum of the History of Science) provides an alternative access and widening participation perspective that is providing a well researched knowledgeable window on the world for the university and wider geographical communities. Widening participation and access in the context of this museum also includes working with people and organisations around the world, who are 'source communities', from which the collections derive. Current projects include consultation with the Minnesota Ojibwe people over the meaning of objects and photographs held in the collections; collaboration with institutions and individuals among the displaced Tibetan community in Dharamsala; collaborating with the Museum of Anthropology in Victoria, British Columbia, working with First Nations on education and interpretive material and programming, linking museum

databases with those of tribal museums in Canada. This global interaction as a means of providing access and understanding of the world to local communities is often neglected in the access and participation discourse.

University Museums: Bridging Town and Gown

This paper refers to two specific museums, the Ashmolean Museum, University of Oxford and the Fitzwilliam Museum, University of Cambridge with missions to bridge town and gown. Several academic Departments thus providing a 'hybrid model' manage the Oxford University Museum, which falls within this general town and gown category⁶. The role of this museum is similar to the Ashmolean and Fitzwilliam Museums, which is to increase the public face of the university by attracting the general public to the museum. Over 269,000 visited the museum in 2001. Structurally; the Museum is a department within the university and the Director responsible for the institution, however all the senior curators are senior academic members of staff from the relevant discipline departments with explicit interests in the collections. The curators and the Director form a committee, which decides on matters such as the display of the collections, library and ICT provision. The museum is a 'department of departments' with similar activities as the other university museums.

A university museum such as the Ashmolean can be described as a teaching and research resource for the University and wider community with no responsibility for undergraduate and postgraduate degree programmes of study or the registering of research students. The Museum staff are employed as academic staff without a primary obligation to teach and research. It is the public face of the university.

1. The Ashmolean Museum of Art and Archaeology, University of Oxford⁷

The Ashmolean Museum, a designated collection, founded in 1683^{viii} and one of the oldest public museums in the world, is, 'the point at which the public meet the University' (Dr. Christopher Brown, Director), and as far as the Vice Chancellor of the university is concerned 'should be one of the most welcoming public faces of the University' (Extract from the Annual Report 1998 – 1999). The Ashmolean is free to visitors, with access for the disabled, is open Tuesdays to Saturdays, 10am–5pm, Sundays 2pm–5pm and occasional evenings (over the summer period).

It considers itself to be the single most important non-national museum outside London. Designated as a department within the university, it comprises the following departments:

- i. Antiquities, which includes a wide range of objects from the Palaeolithic to Victorian periods; covering Egypt, the Middle East, Europe and Britain.
- ii. Western Art, which incorporates drawings paintings prints and sculpture as well as ceramics, metalwork and glass, musical instruments and jewellery.
- iii. The Hope Collection comprises portraits and other books being returned to the museum from the University Department of the History of Art.

⁶ There is a useful description found in, K.C. Davies & J.Hill, 1976, The Zoological Collections of the Oxford University Museum: A Historical Review and General Account, University Museum, Oxford.

⁷ The sources for this section are: Annual Report of the Visitors of the Ashmolean Museum, 2000 –2001 published 2001; Annual Report 1999 –2000 published 2000; Annual Report, 1998 –1999, published 1999; The Ashmolean Museum's Research Profile 1994 – 1999, edited professor J.W Allan published 1999.

- iv. Eastern Art covers the Orient, from the Islamic world of the Middle East through India, Tibet and Southeast Asia to China, Japan and Korea.
- v. The Heberden Coin Room includes coins and medals from around the world, notably, Greek, Roman Celtic, Byzantine, Medieval, Islamic Indian and Chinese.
- vi. The Cast Gallery incorporates sculpture from museums around the world mainly from Roman and Greek contexts.
- vii. The Beasley Archive, of classical archaeology and art is a research unit of the Faculty of Classics.
- viii. The Conservation Department is responsible for the care and preservation of the collections, which includes the examination, documentation, treatment and preventive care of works of art and artefacts.
- ix. The Education Service provides a wide variety of educational programmes for visitors of all ages and backgrounds, including tours, gallery trails, study days, practical workshops and children's activities including family drop-in sessions.
- x. The Griffith Institute specialises in Egyptology and Ancient Eastern Studies with an extensive library and archive.

The museum has attracted over 300,000 visitors including 44,400 group visitors in 2000/2001 of which approximately 20,600 participated in an activity led by the Education Service.

The Director and curatorial staff of the museum are appointed to academic posts within the university and associated with an appropriate Faculty. However, the primary function of the 30 (2000/2001) academic curators is to work as a curator of the museum collections and undertake teaching as an additional duty. There is a Committee of Visitors (the governing body) appointed by the university who are responsible its activities and report to the university authorities. The core funding for the museum is derived from the university and the AHRB channelled through the university.

Learning

The museum plays a role in teaching undertaken in the University of Oxford. In particular teaching in several subjects, including archaeology, numismatics and oriental art, depend considerably on the curatorial staff; who through this work make a major contribution to their associated faculties. Courses such as the undergraduate programme in the history of art rely heavily on the curatorial personnel to provide teaching. The gallery displays are organised to assist university teaching activities, whilst maintaining coherence for the casual visitor. Students volunteer to work in the museum as part of their informal learning activities. The museum has a well-equipped lecture room, which is regularly used by university academic staff.

Research Activity

The museum has a considerable reputation throughout the world for the study of Greek and Roman numismatics, French nineteenth-century drawings, Italian maiolica, English mediaeval ceramics, Greek vases, and Cycladic sculpture although

there is at present no (university) statutory definition of the research role of the museum's academic curatorial staff.

In particular, curatorial personnel contribute to the research assessment exercise through their faculties, which include ancient history, archaeology, history of art, modern history, and oriental studies. Over the last five years, the museum academic staff (27 in 1999) have made a major contribution to the university research profile with; 20 books, 9 jointly authored books, 6 edited books, and 27 chapters in other books, 9 Catalogue raisonnés, 9 exhibition catalogues, 74 entries in other catalogues, and 250 articles in appropriate academic journals. Dissemination of university research often takes place through the museum website, publications and exhibitions.

Curatorial personnel supervise postgraduate research to D Phil level on aspects of the collection and Sackler Fellowships enable senior scholars from around the world to study the collection and produce scholarly catalogues.

The research activity is supported by the Beasley Archive, which provides a resource for students and senior scholars, wishing to study classical archaeology and art. It consists of photographs, notes, drawings, books and impressions from engraved gems. The photographs of Athenaeum vases are the largest archive of this class in the world. In addition the Griffith Institute, which has the largest specialised Egyptological Archive in the world, provides a complimentary research facility associated with the museum collections.

Schools and the Wider Community

The education service established in 1981 focuses on organised group visits of the school children, representing around 50% of all booked groups. The service provides specialist tours to coincide with the national curriculum and also organised courses for teachers offering a means of using museum material in the teaching of different disciplines and demonstrating that well planned visits can stimulate pupils' interest. Professionally produced teacher resource packs on Egypt and on early 20th century European paintings are available. In addition the service provides gallery talks, study days, workshops, family activities and lectures. The service also managed on behalf of the museum an artist in residence scheme. There is a well-developed voluntary guide system operated, which incorporates a comprehensive training scheme.

Internet Access

The museum has an established collections information system which forms part of the website and provides access to the collections. This system is organised into five areas, presentations, units for learning, education and teaching, online catalogues, and an object seeker. There is a continual programme of digital documentation as part of the programme of information accessibility. It is based on the item documentation held in the museum, which is of a high standard.

Observations

This strongly departmental museum operates largely as an independent institution without the explicit research and teaching relationships found in the departmental model described earlier. This semi independence has the significant benefit of enabling the museum to develop relationships with the wider community particularly schools and the expansion of its public service ethos.

However, the connection between this type of museum and academic departments tends to rely on the staff and their interests and there is little evidence of working with the further education sector or with other university departments whose disciplines are not represented in the collections, including the Education Department.

2. The Fitzwilliam Museum, University of Cambridge⁸.

The Fitzwilliam Museum with over 500,000 items is the art museum of the University of Cambridge. It was founded in 1816 by the Viscount Fitzwilliam an eighteenth-century collector whose gift included funding for the building of the Trumpington Street Museum, which was opened to the public in 1848. The museum includes works of art from ancient Egypt, Greece and Rome, the occidental and oriental cultures of the most recent millennia to European and North American art of the last century. The purpose of the Museum is, to safe guard the collections, and make them accessible for the present and to preserve them for future generations. Its key aims are to:

- i. Preservation: by means of a secure and stable environment and a full range of conservation services.
- ii. Access: in the galleries and the curatorial departments for the purposes of study and enjoyment (*utile dulci*)

[Endorsed by the Meeting of the Fitzwilliam Museum Syndicate, professor Gareth Jones, Chairman, 10th June 1996 (Minute viii)]

In this respect it contributes to the general university effort in widening participation and access.

The collection is designated and free to all with 215,659 visitors in 2001, and 1,671,255 website hits over the same period. There were 1,850 serious researchers who attended the museum along with 12,210 school visitors and 179 higher education groups.

The museum comprises the following Departments:

- i. Administration and Central Services is responsible for buildings, security, visitor services, personnel, training, registrations, loans, and marketing and press relations.
- ii. Antiquities contains 27,000 items derived from the civilisations of Egypt, Greece, Rome, Cyprus, and the ancient Near East ranging in date from the fifth millennium BC to the medieval period.
- iii. Applied Arts covers European, Middle Eastern and Oriental applied art and sculpture with over 21,000 items.
- iv. Department of Coins and Medals, one of three principal collections in Britain runs an important research and publication programme and has

⁸ Sources for this section are: The Fitzwilliam Museum Biennial Review 2000 – 2002, published 2002; Statement of Purpose, Museum Syndicate, Minute viii, June 1996; Committee on Research and Teaching Annual Report on Teaching Activities 1999 – 2000 and 2000 – 2001 (unpublished).

developed extensive internet access to its collections. There is an important reference library.

- v. Manuscripts and Printed Books and Reference Library includes 1000 manuscripts based on the Fitzwilliam bequest of 150 medieval manuscripts, in addition there are 10,000 volumes which reflect the interests of the 18th century gentleman scholar, with a musical collection of 1,400 items. Works are held of Blake, Hardy, Housman, Keats, Morris, Tennyson and Thompson.
- vi. Paintings, Drawings and Prints are based on 144 paintings and 40,000 prints left by the Founder which covers European countries, Britain, France, Italy, and the Netherlands from the late 13th century to contemporary art.
- vii. Education provides services to all ages of visitor and aims to enhance their enjoyment of the collections through learning.
- viii. The Hamilton Kerr Institute, established in 1976 as a centre for the education and training of conservators of easel paintings acts as the museum conservation department.

The University employs the curatorial and technical staff of 30 and the primary focus for their work is the museum. All curatorial personnel are associated with a Faculty, which shares an interest in the subject disciplines represented in the collections. Members of curatorial staff voluntarily participate in the Research Assessment Exercise and teaching, which is secondary to the primary function of curating the collections.

The Museum has a governing committee, the Syndicate, which reports to the University Council and the core funding is derived from the University and AHRB, channelled through the University. Endowments and donations are a significant additional source of income. The museum is open Tuesday to Saturday, 10.00 – 5.00pm and Sunday 2.15pm – 5.00pm.

Learning

The curatorial staff are primarily employed to support the work of the Fitzwilliam, nevertheless they undertake an active programme of teaching activities such as delivering lectures and classes to undergraduate degree courses which include the History Tripos, History of art Tripos, the MPhil in Egyptology and the MPhil in History the MPhil in Classics the undergraduate degree in European History, lectures for postgraduates students at the School of Education as part of the education service.

These activities are triggered by the interest and expertise of the staff in the Museum and the association with a Faculty. For example, Mark Blackburn took classes on coins for the Vikings in Europe special paper in the history part 2 Tripos, and two classes with Professor Patrick Boyde on the medals in Renaissance Rome for Part 2 students of the Faculty of Modern and Medieval languages. Duncan Robinson, the Director, served as an examiner for parts 1 and 2 of the History of Art Tripos and the Certificate of Postgraduate Study in the History of Art. Elina Screen supervised one student for paper 7 and three students for paper 13 in Part 1 of the History Tripos as well as to undergraduates for papers 2 and 13 of History Part 1 and 2 for paper 15 of ASNAC Part 2. An Annual Report is published each year by the Museum Committee on Research and Teaching which provides a detailed account all activities, including:

- i. Teaching carried out by museum staff for the University;
- ii. Public lectures and symposium, which involved the staff;
- iii. Activity as assessors, examiners, supervisors and research supervisors;
- iv. Classes in the Museum's curatorial departments by other members of the University.

In addition there are general talks and non-University teaching as well as lunchtime gallery talks.

University students become involved in the Museum on a voluntary basis through the Fitzwilliam Museum Society.

Research Activities

Research is undertaken on a regular basis of by the Museum staff based on their expertise and interest. This is a numismatic reference library, which includes probably the most comprehensive collection of sales catalogues in the UK, which has proved to be a particularly useful source for researchers. In addition the Hamilton Kerr Institute, established in 1976 as a centre for education and training of conservation of easel paintings also encourages research through an endowed post for a research scientist. In addition the Institute accepts two postgraduate students every other year for a three-year diploma course and in addition internships are offered for up to two years to provide research opportunities.

The staff in the Museum contributed over 41 academic papers, catalogues, and chapters in books during 2000/2001. These contributions are voluntarily counted in the University research assessment exercise, reflecting the Museum aim, 'to maintain the highest level of scholarship in research and interpretation of the collections'.

Schools and the Wider Community

The Museum has a well-established education service, which provides structured programmes of learning for schoolchildren based on the national curriculum at key stages. In support of this the service provides teachers notes and aids which are accessible online. The department works closely with the Board of Continuing Education of the University of Cambridge who run courses in the galleries for adults and also with a partner institution, the Workers Educational Association. This includes gallery talks, lectures, courses and events. The service provides training sessions in the museum and in colleges to meet the needs of teacher students in training. These initial teacher-training sessions are capable of being focused on particular aspects of the collection for aspects of teaching in museums such as:

- i. Writing in museum
- ii. Technology through art
- iii. History through art
- iv. Maths through pattern
- v. Faith and art
- vi. Communication.

In addition there is an Inset programme, which includes museum Inset courses, which aim to meet the needs of the teaching profession and respond to changing circumstances as well as the Museum temporary exhibition programme. The second

type of Inset training is intended to meet the needs of professional groupings for a whole school staff, cluster or the staff of the department. These courses can be based on particular areas of the collections, on approaches to teaching with objects and paintings and this type of training is equally popular with teachers of infants as well as those with A level students because the courses are specifically designed to meet identified needs. The education service also participates in national events such as the Adult Learners Week that promotes lifelong learning. It also organises drop in taster sessions to encourage people to become involved in the Museum.

Increasingly the service is focusing its attention on visitors with disabilities particularly those with impaired sight or hearing. There were 539 gallery teaching sessions during 2000/2002 involving schools and 33 training sessions and courses for teachers and student teachers. The National Heritage Lottery Fund is supporting the development of a Web-based resource, which will permit the visitor to explore the collections through a richly illustrated choice of themes and connections across the collections.

Internet

The Museum website is being developed and provides a range of activities and services reflecting the museum interests. The collections online component of the website, which promotes and publicises the museum holdings are electronically available coupled with an online public access catalogue supported through the Designation Fund.

Observations

The Fitzwilliam Museum is a national institution located in a major international educational institution, with a primary aim to preserve and care for the University collections. It undertakes to contribute to a better understanding of art by researching and interpreting the collections and making this information available through, teaching, and educating, the general public, schoolchildren, teachers, and higher education students.

The institutional relationship with the university is similar to the Ashmolean Museum in that individual members of museum staff research the collections and make a voluntary contribution to their associated university faculty. Similarly the teaching undertaken is based on the needs of the academic department within the university and the staff expertise available in the museum.

The education service with a small staff base has developed effective links with the university teacher training activity and the Board of Continuing Education as a means of 'promoting the museum and its services to a wider audiences' and 'devising educational programmes to differing audiences'.

This remit to serve a wider public is similar to many other museums, particularly comparable national institutions, however the distinctiveness of the Fitzwilliam and the Ashmolean Museums is the unique association and exploitation of a major international learning and research institution.

Being the 'face of the University' requires a greater engagement with disseminating the research activity of undergraduates, postgraduates and academic staff to the community at large, acting as the showcase for leading edge knowledge and learning.

An Informed and knowledgeable Future for All

The importance of the university museum model is the provision of a learning institution based on material culture. Collections are organised for teaching at undergraduate and postgraduate levels, non museum academic staff are directly involved in showcasing their research work which is balanced whilst ensuring there is sufficient interest for schools and the general public. Items can be handled and are accessible to academic staff in the university to use for their teaching programmes and research.

The museum personnel are research active and accountable through the university (on a voluntary or obligatory basis), whether the staff are employed directly by the museum or as members of academic departments appointed to the university. They are active teachers and lecturers with voluntary or obligatory faculty, schools and departmental associations, which results in a direct engagement with undergraduate and postgraduate education and supervision.

The facilities in the museums reflect the nature of these institutions, with lecture and demonstration rooms, demonstration laboratories, handling areas, and teaching Galleries. In many cases the museums are directly responsible for libraries and archives or have a close association with such institutions in the university. Displays are available to support research by making as many items as possible available for this purpose. It is encouraging to find substantial numbers of university registered research students engaged with the collections. This level of activity is a noticeable strength of the university museums and has led to high levels of item documentation which is equally important for current and future researchers in developing the national and international knowledge base of the subject, referencing disciplines, understanding the past and informing the future. This is an important aspect of this type of museum and enables the items in the collections to be more widely recognised, researched and written about.

The Internet is seen by all university museums as an essential tool for access to and dissemination of their collections, not least because universities use this medium extensively as a teaching, research and communication tool. In most cases the museums are well advanced or have completed making their collections available through their websites. This has led to the impressive development of virtual teaching tools.

All the university museums provide a service to schools based on the national curriculum and key stages. In the larger museums there are well-developed education services, which work closely with the university education departments, and continuing education services. In many cases teaching material is provided and the university personnel in the museum teach groups.

Given the limited resource base for the smaller departmental university museums it is remarkable how effective they are in achieving their purpose introducing university staff, undergraduate and postgraduate students to the collection as a serious tool for study and learning. In effect, they are encouraging an active engagement with object based research and use of material culture in teaching.

The museum audiences are similar and concern themselves with the university community in all its aspects, the serious enthusiast and voluntary organisations, serious national and international researchers, other higher education institutions,

schools, teachers and the wider community. This provides a focus on the National and international education system, however there seems at present to be less penetration of further education, which approximates to the 16-24 years student primarily studying vocational subjects.

Given the strong clearly focused basis of these museums it is important their activities are strengthened and deepened, by enabling them to become even more successful showcases for the work of the university, and expanding object based research through secondments, fellowships and research seminars as well as embedding object based teaching by working with such organisations as the Learning and Teaching Support Network (LTSN) and the Institute of Learning and Teaching. They should be supported to continue the Internet revolution by ensuring all collections are digitised and available. Resources are needed to increase interest in the subjects represented in the museums for the university community that has no direct interest in them.

These museums provide a remarkable model of curriculum interaction, object based research and knowledge transfer working with national and internationally recognised collections of great significance supported by the Internet as a mass communication tool. It is in this context that these museums are meeting the needs of the current government priorities by widening the knowledge base and deepening understanding and penetrating the formal primary, secondary and higher education system thus supporting their host universities to widen participation.

ⁱ**The Museums and Galleries Commission, Education, Access and Audience Development Officers, Caroline Lang and Sue Wilkinson, defined social exclusion as follows:**

Social exclusion, as defined by the Social exclusion Unit is 'a shorthand label for what can happen when individuals or areas suffer from a combination of linked problems such as unemployment, poor schools, low incomes, poor housing, high crime environments, bad health and family breakdown'.

Exclusion can take many forms. It is about a lack of the access to power, knowledge, services, facilities, choice and opportunity. In some cases people may become so alienated by the activities of the society they live in that they no longer want to participate. Social inclusion is the attempt to work with communities to regenerate their neighbourhoods. The focus of government policies has shifted towards preventing social exclusion rather than merely dealing with its consequences. (MGC, January 2000.)

Access: *One of DCMS' main aims is to broaden access to cultural and recreational resources. It is committed to the principle that these activities are for the many, not just for the few. Recent areas of focus to broaden access include: promoting sport for all; supporting children's play; developing a public libraries IT network; extending access to museums and galleries collections; supporting Heritage Open Days. A nation-wide event providing free access, over one weekend, to buildings that are not usually open to the public or charge an entry fee; putting in place new initiatives to widen access to tourism and broadening access to the Arts through the New Audiences Fund.*

ⁱ**Department for Education and Employment (DFES) Strategic Plan up to 2006. For those in higher education**

The Department is committed to working towards wider participation in higher education, while continuing to improve standards. It will have to ensure that the country has Higher Education institutions that can compete for the best in the world in teaching, research and technology transfer and link closely with business to generate jobs and wealth.

Working with others the Department will deliver:

- *Increased numbers of young people aged 14 to 19 in schools colleges and work-based learning aspiring to progress to Higher Education*
- *Expanded provision to create opportunities for more people to enter higher education*
- *Further development of e learning building on the e universities project*

The Department targets are:

- **Increase participation towards 50 per cent of those aged 18-30 by the end of the decade, while maintaining standards.**
- Bear down on rates of non-completion
- Strengthen research and teaching excellence
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ii **'The Trouble with Museums'**, is authored by Professor David Phillipson FBA, FSA, the Director of the Museum of Archaeology and Anthropology and Professor of African Archaeology in the University of Cambridge. The paper is an edited extract from his inaugural lecture, delivered on 22nd October 2002.

The paper makes a case for university museums, and in particular the need to recognise the close collaboration between academic faculties and departments with university museums, as a contribution to a deeper understanding of the national and world heritage through research and teaching.

iii In 2001 the **AHRB** announced awards totalling some £8.5 million annually to 26 university-based museums and galleries under its newly developed core-funding scheme. The central purpose of the scheme is to provide a contribution towards the basic running costs required for the stewardship of existing collections of the highest quality and regional, national or international importance. Since awards under this scheme were set for five years (commencing in 2001-02), it will not be offered again until 2005.

iv What is **'Designation'**?

Designation identifies and celebrates pre-eminent collections of national and international importance in non-National registered museums. It recognises that museums with Designated collections care for a significant part of England's cultural heritage. Some of the museums and collections in the Scheme are already well known; others have been new discoveries for many of us. The scheme has been continued as part of the Resource remit and to date there are currently 52 governing bodies with Designated collections in England, representing 62 museums or museums services. Resource completed the first phase of a major review of the Designation Scheme and the Designation Challenge Fund in December 2002. Key findings are summarised in the publication The Mark of Success, Re:source.

v As part of the 1992 **Research Assessment Exercise** conducted by the former Universities Funding Council (UFC), higher education institutions in the United Kingdom were requested to provide information on their research activities. The information submitted by participating institutions has been held in electronic form and the database is currently under the ownership of the Higher Education Funding Council for England (HEFCE), the Scottish Higher Education Funding Council (SHEFC) and the Higher Education Funding Council for Wales (HEFCW). These councils assumed funding responsibility for the higher education sector in June 1992. The Funding Councils, through the HEFCE, are now making this information available to the public in the form of text files, which can be read into a wide variety of spreadsheet and database packages. The contents of these files should be viewed in the context of the definitions and notes of guidance issued to institutions in the UFC Circular 5/92 titled "Research Assessment Exercise 1992". This information is used for the purposes of allocating research funding to Higher Education Institutions. Further information can be found on the HEFCE website.

vi **MAGIC**, (museums and galleries in Cambridge), is a schools based educational initiative that promotes working partnerships among the many Cambridge museums. During 1998 and 1999, Catriona West and Peter Jones, (Ipswich Museums) developed teaching materials in collaboration with Kettle's Yard Art Gallery, and presented a series of one-day interactive workshops for 7 - 10 year-olds on the wonders of light.

vii The importance of **ICT** to access, learning, research and teaching is explained in the *Information and Communications Technology and the Development of Museums, Libraries and Archives, A Strategic Plan for Action*, Re:source, 2001.

^{viii} **Further reading** on the history of the Ashmolean Museum can be found as follows:

- R.F. Ovenell, *The Ashmolean Museum 1683-1894* (1986))
- See also the chapters relating to the Ashmolean and to the University Galleries in *The History of the University of Oxford*: vol. V *The Eighteenth Century* (1986); vol. VI *The Nineteenth Century* (1997); vol. VII *The Twentieth Century* (1999).

17 November 2004 Simon Roodhouse