# WWW.BEAZLEY.OX.AC.UK FROM APPARATUS OF SCHOLARSHIP TO WEB RESOURCE THE BEAZLEY ARCHIVE 1970-2008

## 1. Introduction

We are all people of our time. My academic career began when computers began moving from the Sciences into the Humanities. Although I knew that I would be a classical archaeologist from the age of twelve, I had a natural interest in science and systematic methodologies. I was going to like computers.

What has made my experience unique is my job; when Sir John Beazley (Fig. 1) died his executor and successor to the professorship at Oxford asked me to "look after" his archive. My entire career has been inextricably connected with it. This means that a tradition of scholarship in one institution, even one faculty, can be traced over a century – from Beazley's creation of a personal apparatus of scholarship, that was rooted in 19<sup>th</sup> century German academia, to today's web resource that serves schools as well as senior scholars, museums, collectors, and a global public. The Archive's success is, however, due not to who we are or where we are, but to what we study – the art of ancient Greece and Rome – and to how Beazley recorded data about it from 1908.

Today there are two archives: Beazley's bought by the university in 1964, and the electronic resource that began in 1979 (Fig. 2). The aims of both are

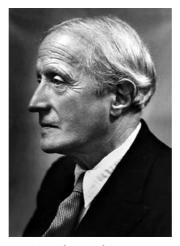


Fig. 1 – Sir John Beazley (1885-1970).



Fig. 2 – The Beazley Archive web site.

the same: advancement of knowledge and public service. Public service is, I think, largely a result of my nationality and early life. An American from the mid-west, who was given a scholarship to study at Oxford University, I arrived in awe of the wealth of resources of an ancient European university, and I remain in awe. Since I was given an opportunity I have wanted to share it with others.

You will have the impression that I had an ideal job in an ideal place; success was inevitable. Since an objective of this meeting is to share experiences I would now like to explain how difficult it has been to sustain the Archive, and to transform an apparatus of scholarship into a research centre with a heavily-used web site.

The challenges along the way have been great. The greatest for me, as for anyone trying to sustain a computer project in the Humanities even now, is funding. A classical archaeologist, however, has other challenges. The subject stands between archaeology and art history. Oxford boasts the largest Faculty of Classics in the world and classical scholars, at least in Oxford, tend to privilege texts over objects. For decades I tried to persuade them that computers were a good thing and, like my predecessors in classical archaeology, to persuade them that material culture is as important to the study of classical antiquity as the language and literature. The potential of ICT has now been widely accepted but the appreciation of material culture can still be undervalued.

## 2.1970-1979

Before anyone can begin a computer project the material needs to be in good order. Beazley's archive consisted of 100s of 1000s of photographs and notes on classical art, 10s of 1000s of gem impressions and many 1000s of drawings, books and off-prints. While all of this was in Beazley's home it was in his personal order, but during the 1960s his health declined and order descended into chaos. In 1970, the year he died, the material was hastily packed and transported to Cast Gallery of the Ashmolean Museum.

Why? The professor of classical archaeology was also its curator. In the early 1960s a gallery had been built behind the museum for the plaster casts of antique sculpture that had been removed from displayed at its entrance (Fig. 3). The new building had some empty storerooms, and Beazley's archive was moved into them. It remained there for more than 30 years, largely in the packing cases used to move it in 1970. For decades we had no money, no space – not even natural light or ventilation.







Fig. 3 – Ashmolean Museum, Cast Gallery.





Fig. 4 - The Ioannou School of Classical and Byzantine Studies.

Then, in the spring of 2007, the Archive was reunited with its academic base – the Faculty of Classics – and given much of the top floor of the Faculty's new Ioannou School for Research in Classical and Byzantine Studies (Fig. 4).

The first decade of the Archive's life in the university was uncertain and chaotic. Computers came at the very end, in 1979. This was so early for computing in the Humanities that the university was eager to work with us. Susan Hockey and Lou Burnard – two giants of early humanities computing – wrote our first programmes in Famulus files, which most of you have probably never heard of. This first decade was spent alone and unpaid in a dreary basement – not in this light and airy space – putting things in order and making accessible that part of the archive that was unique – the photographs of ancient Greek pottery.

## 3, 1980-1989

The second decade was given over to the creation of the pottery database because that was Beazley's area of special expertise. You might expect that we began with his large collection of photographs. We did not, because imaging equipment was embryonic and networks were incapable of delivering images. We began instead in libraries with pencils and paper, creating text records. Our data fields were largely the ones Beazley had used in publications from the 1920s. Because he gave us "authority lists" and an internationally accepted



Fig. 5 – The Beazley Archive. Athenian pottery 625-300 BC.

vocabulary we could populate the database quickly. We have always used senior post-doctoral researchers and they have worked closely with me and Sir John Boardman. For much of this decade we received grants from the J. Paul Getty Trust in Los Angeles – a then young organisation that was keen to collaborate internationally.

Since Beazley stopped actively working in the early 60s we took 1960 as a start date for data collection. Our researchers spent hours in libraries recording vases unknown to Beazley and adding new data about those he knew, and even more hours inputting the data. They focused on Athenian figure-decorated pottery made between 625 and 300 BC (Fig. 5). This is a large body of material – an estimated 150,000 objects – with rich decoration about life in classical antiquity. It was ideal for electronic classification: large numbers and well-established parameters.

#### 4. 1990-1999

By 1990, the beginning of our third decade, we had a large, well-structured database of Greek pottery with text records available online through the rather primitive Gandalf service. This meant that we were well placed to participate in EU R&D projects that were beginning to use European cultural heritage to develop telecoms networks for image transmission.



Fig. 6 - The Beazley Archive. Sculpture and plaster casts.

Between 1992 and 1996 we participated in four EU projects that gave us opportunities to work with IBM, Nokia, Telefonica, FranceTelecom, British Telecom and some of Europe's greatest museums – the Uffizi, Prado, Musée d'Orsay, and State Museums of Berlin. These projects brought significant funding and huge challenges: a project like RAMA (Remote Access to Museum Archives) was truly visionary; only now can technology begin to realise it. In retrospect I can see that without this EU funding the Beazley Archive would not have survived: it was still too early for most humanists to value ICT.

During the 90s we also scanned Beazley's photographs of pottery – about 150,000 b/w photographs – and we created more databases on other types of material, initially plaster casts of classical sculpture (Fig. 6). Since we were housed in a museum basement full of casts this was an obvious thing to do and it had great potential for the Collection and Reception of classical art.

Later we turned to documentation of engraved gems for a similar practical reason: Sir John Beazley and Sir John Boardman had collected 10s of 1000s of impressions – exact copies – of gems carved from antiquity to the present (Fig. 7). These were like tiny plaster casts.

Soon we had more than twenty databases with different types of material. Since we wanted users to be able to extract data from all of them we needed a database that could do this. Greg Parker, the Archive's Technical Director, who had worked with me on the RAMA project, carried out the programming, RAMA is the mother of CLAROS to which I shall soon turn.



Fig. 7 - The Beazley Archive. Gems.

While we were scanning images and broadening our subject range, the web was developing. Since we had been online with Gandalf from the early 80s, and were working with telecoms companies in the early 90s, we were well aware of these developments and that explains why our web site had begun by the mid 90s. By 2000 we had created thousands of static web pages in different formats. By the end of our third decade our databases and our web pages were in urgent need of modernisation.

### 5, 2000 ONWARDS

As we entered our fourth decade we gave priority to validating and updating our records and to transferring the 1000s of static web pages into Cascading Style Sheets. We continued to enhance our scholarly databases and to add many thousands of colour digital images. We also undertook major new projects.

The digitisation for the web of more than 300 volumes of *Corpus Vasorum Antiquorum* and the creation of an underlying database with a fivelanguage search facility was a major activity between 2001 and 2004 (Fig. 8). Our earlier work on plaster casts was also transformed during these years into a new web site: http://www.plastercasts.org/ (Fig. 9).

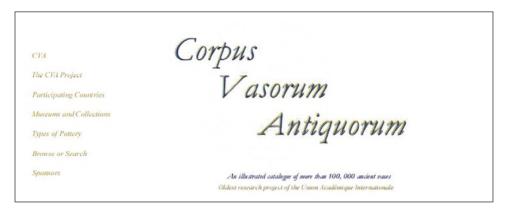


Fig. 8 – http://www.cvaonline.org/.

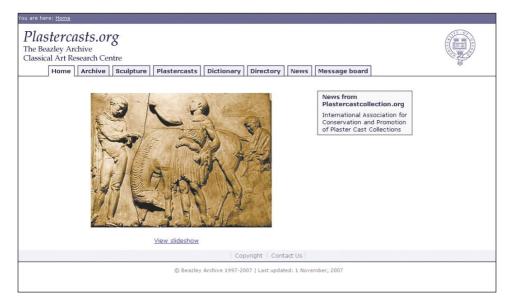


Fig. 9 – http://www.plastercasts.org/.

In 2001 we began to envisage CLAROS as a modern RAMA with distributed databases and a single search engine (Fig. 10). I had worked with Lexicon Iconographicum Mythologiae Classicae from the 80s, and with Sculpture Research Archive in Cologne from the 1990s; both had large datasets. Cologne was already working with the German Archaeological Institute. Our small group has stayed together without any funding.

At the beginning of the decade we assumed that CLAROS would use our thesauri of terms translated into different languages, but ICT changes



Fig. 10 - http://www.clarosnet.org/.

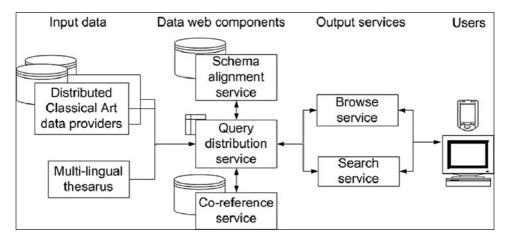


Fig. 11 - The CLAROS data web.

rapidly, and from 2007 we realised that this approach was old-fashioned. The second generation web – the Semantic Web – was coming and so was image recognition that could enable users to search without words.

The University of Oxford was developing expertise in both of these areas. In 2007 it had also established an e-research centre where Humanities groups like the Archive could work with ICT leaders.

In the summer of 2008 we began a CLAROS proof-of-concept dataweb project with Beazley, *Lexicon Iconographicum Mythologiae Classicae*, the Cologne sculpture archive, and the *Lexicon of Greek Personal Names* in Oxford. The last is a natural bridge between text and image in classical studies (Fig. 11).

This diagram suggests a possible structure. We expect to use different types of searching, with satellite maps and timelines, image recognition and some artificial intelligence. Our assets at the outset are very large, highly structured and intellectually coherent and our subject is intelligible to a worldwide audience. CLAROS is not only a model to be extended to other datasets, it is also an ideal test bed for developing the next generation of the web.

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#### **ABSTRACT**

Over nearly four decades the Beazley Archive has developed from a personal archive, whose origins were rooted in 19th century classical scholarship, to a state-of-the-art electronic resource that can be used anywhere, at any time by anyone. The challenges along the way are noted and the ways they were met, in the hope of inspiring others to persevere.

noted and the ways they were met, in the hope of inspiring others to persevere.

The first decade was "organisational", the second saw the adoption of ICT, the third was dominated by participation in EU R&D projects in telecommunications, and the fourth

by the Vision of ĆLAROS - Classical Art Research Online Services.

Since this lecture was given in autumn 2008 the CLAROS Vision has become a reality: by August 2009 more than two million records and images were integrated virtually using CIDOC-CRM. By adopting an ISO programme developed under the aegis of UNESCO for ICOM, the International Council of Museums, and by enhancing it with Open Source software, CLAROS offers a platform that any museum or research institute with digital assets can use free of charge for the public benefit.

As the Beazley Archive approaches its fifth decade, it looks forward to collaborating for the advancement of scholarship and dissemination of results to the global community.