AHRC Research Centres and the Use of ICT

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1. Introduction

The AHRC's Research Centres scheme was an open and responsive competition, aimed at fostering collaboration within existing disciplinary margins.[i] It was not in any way prejudiced towards ICT users or research. It thus provides an ideal opportunity for litmus-testing the current ICT activities, needs and views of the wider arts and humanities research communities engaged in institutional collaboration, not just those with pre-existing computing interests. To accomplish this, the AHRC ICT in Arts and Humanities Research Programme and the AHDS visited all nineteen AHRC Research Centres between September 2004 and March 2005. This followed a wide ranging, and largely free-text survey document, which was emailed to all the centres beforehand. The aim of the survey was to discuss with senior and / or technical staff the centres' interests and activities in ICT, and thus form an institutional overview of the field as represented in the AHRC's subject communities. This report pulls together the outcomes of these visits.

It is essential to note that this report offers no academic judgements about the centres' activities or outputs, nor does it form any part of the AHRC's formal evaluation of the centres. Furthermore, no criticism of any centre should be inferred simply because it is not making use of ICT, although in such cases we attempt to assess why this is the case.

All the centres are, in varying ways, collaborative exercises, and often draw on the expertise of more than one department and / or HEI. For the purposes of this report, a useful distinction can be drawn between *research themes*, which are the academic subject domains and sub-domains addressed by the centres, and *activities*, the latter of which relevant here are ICT methods and applications which centres use to approach one or more theme. Activities here are defined very broadly. They can be types of application, such as digitisation, or courses, conferences, colloquia etc which involve ICT. Themes are addressed by specific research projects and strands. For example, the **Centre for North East England History** approaches five principal research themes based on 'Time, Space and Boundaries', 'People and Migrations', Power, Politics and Religion', 'North-East Culture – A Long Perspective' and 'External Relations'. Each is under the leadership of an Associate Director based at one of the centre's partner universities. Each strand is run by a management committee, but all are inter-institutional.

We have found that, very broadly, ICT activities falls into one of two categories: communication and collaboration, and digitisation and analysis. The relationship between the two is not necessarily directly proportional: advanced, or relatively advanced utilisation of digital communicative tools does not always mean that the centre is engaged in advanced application of computation methods in its research projects. This is illustrated by the fact that centres whose

primary intellectual thrust does not invite very much advanced use of analytical or project-based computation methods (see below), such as law or philosophy, can nonetheless have Wiki set-ups (**Centre for, Logic, Language, Mathematics and Mind**), or interests in E-publishing (**Centre for the Study of Intellectual Property and Technology Law**). This distinction is very significant, as is the fact that there is not always a relationship between the two types.

2. Communicative and collaborative use of ICT

Analytical ICT activities and related occupations are sometimes confined to individual themes, but can be centre wide, with conscious efforts to cross-fertilise methods between projects often in evidence. However, each centre exhibits far more centralisation when it comes to communications use of ICT. This is to be expected: an obvious need for each centre is to be able to communicate effectively with its research audiences as an entity.

2.1 Websites

Each centre has a website. It is clear, however that in most cases they are primarily to advertise and promote the centres, rather than to provide significant access to research outputs or raw data. This is underlined by a cursory glance at these websites' content. All the websites have event listings, brief descriptions of research projects and, with one exception, lists of staff profiles: content of this type is clearly angled at advocacy and advertisement. However, there is a recognition that websites can provide access to resources. Two centres, the **Centre for the Evolutionary Analysis of Cultural Behaviour** and the **Centre for North-East England History** list URLs to external resources, whereas the **Centre for the History and Analysis of Recorded Music**[ii] – one of the two new Research Centres whose activities are still at a relatively early stage – is currently trialling a discographical database of early recordings. Other centres, such as the **Centre for Irish and Scottish Studies** and the **Centre for Editing Lives and Letters** maintain websites which include specific research and dissemination processes.[iii] The **Centre for Cultural Analysis, Theory, and History** pointed out that although they would like to put teaching resources online, there was some concern that this might lead to the resources being cannibalised in an inappropriate manner. Many centres have identified their websites as a means of facilitating conferences, and of depositing documents in secure, password protected areas (the **Parkes Centre for the Study of Jewish / non-Jewish Relations** being a good example). However this, and similar, approaches have not always been successful, as the case of the **Centre for Studies in Intellectual Property and Technology Law** demonstrates. They explained that a web-based system had been developed to allow users to leave comments and start an online dialogue: however the comparative ease and availability of email meant it continued to be preferred by most users (it is interesting to note in this context that this centre also said that they would benefit more from a dedicated member of staff for web development, not for more general ICT support).

It appears that some of the centres may have underestimated the resources they need to provide a good web presence. This is often because resources are (quite rightly) prioritised towards research and content creation. However, the potential benefits for the centres' web presences should outweigh the small budget increases. The **Centre for Cross Cultural Music and Dance Performance**, for example, told us explicitly that it did not feel equipped to produce a website to the standard they would wish, and that training in packages such as Dreamweaver for relevant staff was a major need. Although any generalisations must be hedged with the usual caveat that there are exceptions, such lacunae in provision are widespread, and we

suspect are the result of a general lack of ICT awareness that exists pre-award. And even where there is ICT awareness there is not always the expected institutional help. A further common (and potentially more serious) problem is that a lack of resources for designing websites often translates into a lack of resources for maintaining and updating them. It could be noted, for example, that two weeks after the AHRB became the AHRC (13th April 2005), only five of the nineteen centres had updated their sites with the new logo – and not all of those had updated all their webpages and / or links. Again, this is likely to be due to a lack of support and pressure of priorities, but it suggests that more substantive aspects of the websites are probably outdated, undermining the overall perceptive reliability of the information held on them.

2.2 Communication methods

Email is of course used regularly by centres staff. However, some have trialled more advanced communication methods. The **Centre for Logic, Language, Mathematics and Mind**, for example, established a CMS based Twiki structure, which it said had been critical in promoting philosophical discussion within the centre. However, they were confronted with an expertise problem: when the designer of the system left for a new job, the centre relied on his continued assistance in order to maintain the system, although he was not physically present. The centre is now using WebCT to host online discussion boards, which is functioning well. The **Centre for Editing Lives and Letters** has also used WebCT, the VLE it uses in teaching its MRes course, to facilitate communication. Although it works quite well for the students, they found that staff prefer e-mail. The on-line calendar, for which there were high expectations, has not been used after the first burst of enthusiasm (this provides a parallel with the **Centre for Intellectual Property and Technology Law's** experience with web based communication areas – see above). The **Parkes Centre for the Study of Jewish / non-Jewish Relations** found, after a period of trial and error, that MSN instant message worked well for them. In both cases, however, it was noted that the success of these communicative models depended entirely on the presence of expert staff, who happened to have the relevant expertise in their portfolio of skills (a recurring pattern across all the activities we looked at). Elsewhere, there was a lack of awareness of such methods. Although other centres told us outright that such methods were not necessary for their collaborative and communicative activities, others indicated a willingness to explore such options.

Experiments with videoconferencing have not, generally, been successful. We have come across several examples where the possibilities were recognised, but physical and infrastructural limitations to some extent hindered its uptake. This was the case at **Centre for Logic, Language, Mathematics and Mind** ,who, despite the system's overall benefit, experienced some obstacles with regard to audio hardware and the University's firewall (which St Andrews' IT Service were able to assist in overcoming), and at the **Centre for Environmental History**, which found it too expensive and the facilities inadequate.

2.3 Subject communities

A further common element for all the centres is connectivity with their subject communities, and more basic ICT methods are critical to this. Centres such as the **Centre for Cultural Analysis, Theory and History** and the **Centre for Cross-Cultural Music and Dance Performance**, whose fundamental intellectual thrusts are providing links across disciplines, regard this as critical. All but four of the centres have electronic mailing lists and / or online access to newsletters, and they maintain databases of interested parties from various sources. These can

come from respondents to websites, known professionals in the field or fields, conference attendees etc. There was also a feeling in some centres, expressed particularly strongly by the **Centre for Asian and African Literatures**, that maintenance of such infrastructural resources was taking up too much time, and the AHRC could provide better support in terms of training and advice.

2.4 E-publishing

There is an clear emergent interest in E-publishing. Six of the centres either already have or intend to develop E-journals. These are typically localised, publishing papers from conferences and colloquia organised by the centre, and / or papers written by its staff or students. All these centres recognise the fundamental importance of peer review and / or editorial control, although there is not a great deal of interest in the wider issues of Open Access / Author Pays etc. Where they exist in the Research Centres community, E-journals are functional, community-focused and were created in response to a need perceived by the individual centres for easy dissemination. The **Centre for the Study of Surrealism and its Legacies** – whose primary ICT related interest was their E-journal - identified a tension between the immediacy of E-publishing and the inevitable time costs of putting content through the editorial processes needed to ensure their intellectual value. This centre, and others with E-publishing interests, suggested to us that a form of non-binding guidelines and standards for such publications would be welcome, Such guidelines could form part of the AHDS Guide to Good Practice series. In all cases the E-journals were freely available, and the centres were confident that they had made a positive impact (although precise data on their uptake or circulation was not available).

The **Centre for Editing Lives and Letters** discussed establishing an E-journal, but felt that the administrative overhead of regular publication was too great. Instead they adopted a policy of *ad hoc* publication of E-prints of interest to their research community - mostly these are conference papers that are considered to be valuable to a wider audience. Again, this reflects a pattern of localised and responsive E-publishing, which adapts to individual community and thematic needs, rather than following any pan-disciplinary standards or practices.

3. Digitisation projects

While not ubiquitous, the development of a digitisation project was a common feature of the Centres' work. 14 of the 19 Centres had established or were planning digitisation projects; in 11 of these Centres, the digitisation played a noteworthy part within the Centre's activities, significantly contributing to at least one strand within their research programme.

Centres from all different subject areas tended to have an interest in digitisation. The exception was Centres where the main intellectual thrust was philosophical, legal or theoretical discussion (for example the **Centre for Law, Gender and Sexuality** or the **Centre for Studies in Intellectual Property and Technology Law**), where there is less scope for creating and exploiting digital resources than in other fields. But as is seen from Section 2 of the report, these Centres have exploited computers in other fashions.

During their Centre visits, the writers of this report were told of 30 digitisation projects, although it is suspected that the actual number will be higher – interviewees did not always have a clear idea of the precise nature of projects at partner institutions.

3.1 Datatypes being Created

The use of databases proved popular whatever the subject area. Nearly every project was developing a database to house and / or deliver the digital data they were creating. Of significant interest is a break down of the type of digital content inserted into such databases, and the results of this can be seen in the graph below.

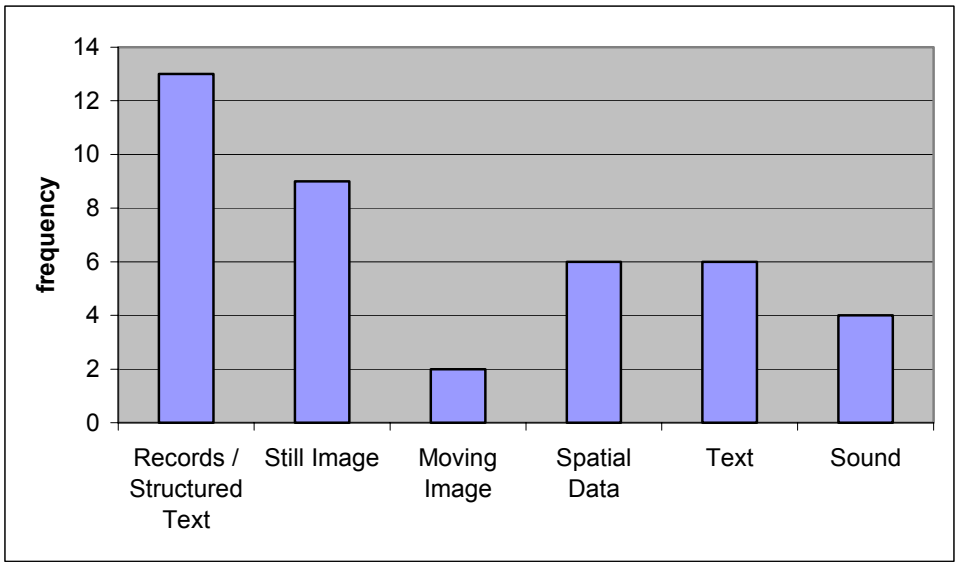

Chart 1 – Breakdown of digital content created by AHRC Research Centres
(NB: Single projects may have created more than one datatype)

The development of a database containing structured records was the most common methodology to be used. The *Database of Scottish and Irish Emigration*[iv] at the **Centre for Scottish and Irish Studies** was a typical example. Shipping logs with details of outward passengers had been inserted into a database, thus creating a tool for the analysis of émigrés from the Scotland and Ireland to the Americas. At the time of the visit, the Centre was making the database accessible online for other users to analyse. Other examples of record entry included the **Centre for the Study of Renaissance Elites and Court Cultures'** *The Letters of Lorenzo de' Medici, 1480-1486*[v], available online via simple html pages, and the **Centre for British Film and Televisions Studies'** database of *The Early Film Business in London, 1894-1914*.[vi]

Sometimes such databases contained images and longer passages of text. The database developed by the **Centre for the Study of the Domestic Interior** contains sources representing the domestic interior from 1400 to the present; these include both textual descriptions and visual images, with contributions coming from a variety of international scholars. The *Deliberately Concealed Garments Project*[vii] at the **Centre for Textile Conservation and Textile Studies** is another example of a database of records and images.

The spread of digitisation methodologies being used by the Centres quite closely reflects broader digitisation practice, i.e. a majority working on not too complex projects involving record entry into databases but with a significant minority exploring more particular forms of data capture and analysis.

The one surprise is the relatively small number of projects dealing with digital text. This is quite probably a legacy of the few Panel 3 and 5 subjects funded in the Research Centres scheme. The **Centre for Editing Lives and Letters** was the notable exception to this, for example providing an updated edition of *Robert Boyle's Workdiaries*, which included both digitised images and XML text. The Centre also provides valuable research on some of the technical and scholarly issues in applying XML mark-up to digital texts. The **Centre for the Study of Jewish / Non-Jewish Relations** was also exploiting digital text, using XML to mark up the Greek Septuagint and create the *Demetrios Database: A Database of Septuagint Greek*.[viii] This particular project is also rare in making use of existing digital material (ie an existing digital version of the Septuagint bible) rather than creating it from scratch.

The creation of moving images in digital form was not common. The one notable exception was the **Centre for Cross-Cultural Music And Dance Performance**, based at SOAS and the University of Surrey Roehampton. Researchers were recording ethnographic material from various different African and Asian cultures in digital form, and then returning it to SOAS for editing and DVD dissemination. Dealing with the raw material raised many (currently unclarified) issues about how best to edit and document the raw material so to create a scholarly edition and, on the technical side, raised problems in how to develop a technical infrastructure to manipulate files of such extreme size. The **Centre for Cultural Analysis, Theory and History** also faced similar technical problems with the large amount of digital and analogue video they had created in recording speakers at conferences they had organised. Besides technical infrastructure, the Centre's video collection raised issues relating to metadata and data protection.

Digital audio was also rare, although the number of digital projects being undertaken by the **Centre for the History and Analysis of Recorded Music** pushed the final number up somewhat. Besides being involved the digital capture and editing of digital sound, predominantly classical 78rpms recorded prior to 1950, the Centre also demonstrated advanced analytical methods for audio, using a variety of programs to analyse the music they had been capturing in digital form.

The utilisation of spatial data was mainly restricted to those dealing with archaeology, although the **Centre for North-East England History** did cite some interest in utilising GIS. Projects at the **Centre for the Evolutionary Analysis of Cultural Behaviour** and specific archaeological projects at the **Centre for Byzantine Cultural History** were exploiting spatial data. One project at the former Centre, *Spatial analysis of cultural change in the early Neolithic of Europe*[ix], used radiocarbon dating to analysis cultural diffusion in Europe, and briefly mentioned other projects at the Centre where the development, analysis and visualisation of spatial and numerical data was playing a fundamental part.

4. Infrastructural issues

4.1 Copyright

For some of the Centres copyright issues caused significant complications. Each of these difficulties was distinct – it is impossible to identify one common copyright problem that straddles all the arts and humanities. The **Centre for the Study of Surrealism and its Legacies**, for instance, had serious problems in obtaining digital images for its e-journals. DACS (the Design and Artists Copyright Society) did not offer educational rates for the reproduction of images, thus inhibiting the Centre's ability to offer readers of their journal the

necessary range of images illustrating the text. Meanwhile, the **Centre for the Study of Jewish / Non-Jewish Relations** had considerable problems in obtaining a licence to mark-up and disseminate a text that a German organisation had already digitised. Other problems, such as the range of issues raised by videoing performance in non-Western countries, were also cited, in this case by the **Centre for Cross-Cultural Music and Dance Performance**.

4.2 Advanced Training

A significant minority of the Centres had developed specialised skills in handling and editing digital data. As much of these skills are not available elsewhere, there exists the possibility for offering advanced training to both students and other research staff. The **Centre for Editing Lives and Letters** was the most conscious of this, offering an MRes course with a significant IT element and some valuable exemplars in creating scholarly editions of electronic texts. The **Centre for the History and Analysis of Recorded Music** also cited the possibilities for training students in digitising and editing music. Plenty of other pockets of expertise within the AHRC Research Centres were identified, and greater dissemination of their work would benefit the wider research community. This is a critical issue. It is hoped the Methods Network, and a database of Research Assistants (as currently being planned by the AHDS and AHRB ICT Programme), will be able to exploit this.

4.3 Sustainability and Infrastructure

Discussions with Centres on sustainability tended to begin outside the digital sphere. Centres expressed obvious worries about the long-term retention of staff, the development of research projects and the loss of an established infrastructure within a university. When discussing sustainability in a digital context there were, as with many other AHRC-funded projects, also worries about the continuing availability of websites, resources and resource interfaces once funding has ceased. Through its preservation services the AHDS offers solutions to some of these problems, but only some Centres had been in contact with the AHDS. Those that tended to be more *au fait* with digitisation tended to have pre-existing knowledge of the AHDS. Centres where digitisation projects had developed more spontaneously were less likely to have heard of the AHDS (or indeed other services such as Humbul).

The lack of contact with the AHDS could partially be explained by the initial set up of the Research Centres Scheme. Unlike the Resource Enhancement and Research Grant, there was no requirement to complete a Technical Appendix, which often involves sustained practical engagement with the AHDS.

More generally, the lack of cross-fertilisation between Centres was slightly disappointing. At a basic level, many of the Centres were doing similar tasks and would have benefited from communications between themselves and perhaps greater direction from above. In terms of Centre administration, there was a particular need for guidance, both in ICT and non-ICT terms. Centre administrators frequently expressed the need for initial help in maintaining contacts databases, organising financial spreadsheets, administering electronic mailing-lists and designing newsletters. When it came to digitisation, greater communication between Centres and increased exploitation of existing support services would have proved beneficial. Many of the problems faced by Centres' projects during their lifetime could have been avoided by greater planning and support early on. Certain projects had also spent time building tools for their own projects (e.g. multi-user databases, templates for e-journals) whilst other projects were doing similar things. Knowledge of the current existence of such tools and resources would have saved much repetition of labour at different Centres.

But the lack of communications comes from a wider problem about the integration of ICT into Research Centres' schemes of work. A frequent lament was that original Centre plans had not given sufficient time nor money to dealing with ICT. Budgets and staff priorities therefore had to be shifted around in order to develop project websites, liase with university computer services, construct databases and digitise materials. This necessitated a need for researchers to learn new skills quickly or for postgraduates to be employed on an *ad hoc* basis. While some researchers enjoyed such challenges, it was often felt that this took precious time away from doing actual research – it would have been much more efficient if dedicated support were available for such work.

4.4 Institutional support and expertise

Very few centres enjoyed any ICT support or advice for their research activities beyond basic IT helpdesk-level. In one case, a centre was experiencing serious resistance to its activities from its HEI's IT Service, which was objecting to the volume of data on the centre's website and imposing firewall restrictions which the centre's staff felt were unreasonable. At the other end, again only for example, the **Parkes Centre for the Study of Jewish / non-Jewish Relations** had little or no need for routine IT service provision, as all the relevant expertise are in-house. These are extreme cases, and between them there is a general pattern which suggests that applicants for Research Centre grants assumed that HEI IT services would provide all necessary IT related research support. In most cases, this does not appear to be born out be experience. It should be noted that most IT services are neither equipped, nor intended, to provide academic support. A blurring of the distinction between the day-to-day infrastructure that IT services are (generally) expected to provide, and the middle to higher level technologies and methods that constitute even basic ICT (and ICT related) research, is in evidence. A straightforward, yet more formal, system of dialogue between host institutions and applicants would go a long way towards restoring this important distinction.

Where ICT related activities have taken place, the principal ICT activities on both the communicative and analytical sides have been carried out by staff who happen to have the relevant skills and / or experience, and who were not hired by, or associated with, the centre with any particular ICT development agenda in mind. An exception which proves this rule is the **Centre for the History and Analysis of Recorded Music,** which is carrying out highly advanced analytical work (but less so on the communicative side), and which is receiving extensive expert support from the Centre for Computing in the Humanities at KCL, and which budgeted for the resources and people necessary. A second exception is the **Centre for Editing Lives and Letters**, which identified itself as a source of advice rather than a seeker of it. They noted that there was no formal system to which they could refer such requests where appropriate (i.e. where the centre did not have the time or resources to deal with them themselves), and noted that such a system would be beneficial.

It became apparent that for any such future schemes it will be vitally important for Centres / Projects to integrate ICT into their initial workplans and budgets, quite possibly as part of wider insistence on the importance of good project management before the Centres receive money. They also needs to be, from the very outset, greater awareness of various support services (e.g. Netskills, the AHDS, Jiscmail, the Methods Network), knowledge of where to locate dedicated support (both locally and nationally) and awareness of the value of discussing issues with projects that are, or have been, in a similar position. Currently, there is no common strategy between the centres' ICT agendas, and thus no kind of intellectual cross-disciplinary culture, even though such a culture would be of clear benefit to all. It must be stressed very strongly that

this is not to advocate imposing requirements on centres to meet minimum levels of ICT engagement – that would be absurd - but to allow them to carry out an informed assessment of how their research can gain maximum benefit from all levels of ICT, and then reap those benefits as part of a broader strategy. Too often projects begin and then concentrate on their own work only. Once awareness of a much larger infrastructure and the importance of planning for the use of ICT are in place, then there will be much greater opportunity to develop, share and exploit the wide variety of skills spread throughout the country.

5. Recommendations and possible Actions for similar Research Schemes in future:

5.1 A much better awareness of the large support infrastructure already in existence at both local and national level is required. Existing skills and knowledge also needs to be exploited

- Regular (yearly?) meetings of award winners. Different events for different staff - project Directors, ICT staff, digitisers, administrators
- A checklist of technological issues to be resolved between applicants and host institutions IT prior to application
- General AHRC promotion of existing support service infrastructure
- Use of AHDS / Methods Network to share and disseminate ICT skills and tools and get relevant projects talking to one another
- Establishment of mailing list and maybe electronic newsletter, or use of existing AHRC communication channels to reflect the issues raised here

5.2 Grant-winners need to be aware of the time and cost issues involved in exploiting ICT, and this incorporated into plans and budgets when projects apply to the AHRC

- Application submissions must include and be judged on this type of information
- Early meeting of award-winners should reinforce this need
- AHRC must expect slightly higher costs

5.3 Copyright Issues

- Greater awareness of copyright issues and existing support (whether national or institutional) is again required
- Development of a 'users' agenda' to provide a united front for arts and humanities researchers when dealing with copyright issues.

5.4 Sustainability

- Applications forms should give some thought to exit strategies, and sustainability of digital (and non-digital, i.e. staff) resources
- AHRC policy on how projects progress once funding has ended is required.

5.5 E-Journals

- Advisory standards for E-journals produced using AHRC funding covering peer review and editorial protocols are required

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[i] http://www.ahrc.ac.uk/holders/research/research_centres.asp (Last accessed 13th April 2005)
[ii] http://maple.cc.kcl.ac.uk/ps/charm/web/content/italian_catalogue/index.html (Last accessed 13th April 2005).
[iii] See http://www.abdn.ac.uk/~his031/emigscot.htm and http://www.livesandletters.ac.uk/wd/index.html respectively (both last accessed 15th April 2005)
[iv] http://www.abdn.ac.uk/AHRCciss/data.shtml (Information about database only, 4th April 2005)
[v] http://www2.warwick.ac.uk/fac/arts/ren/research/italianelites/lettere/ (Last accessed, 4th April 2005)
[vi] http://www.bftv.ac.uk/projects/bbklondon.htm (Information about database – construction currently under way, 15th April 2005)
[vii] http://www.concealedgarments.org/ (Last accessed, 4th April 2005)
[viii] http://www.extra.rdg.ac.uk/lxx/ (Last accessed, 4th April 2005)
[ix] http://ads.ahds.ac.uk/catalogue/specColl/c14_meso/ (Last accessed, 7th April 2005)