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**The Use of Information and Technology by
Humanities Scholars**

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Overview of this talk

- Overview of UCLiC
- Overview of SLAIS
- Overview of the UCIS project
- Some findings and implications from a recent study
- Future directions

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**UCL Interaction Centre
The history and the place**

- Founded 2001, builds on EU heritage
- Psychology & Computer Science
 - Interaction room
 - Usability labs

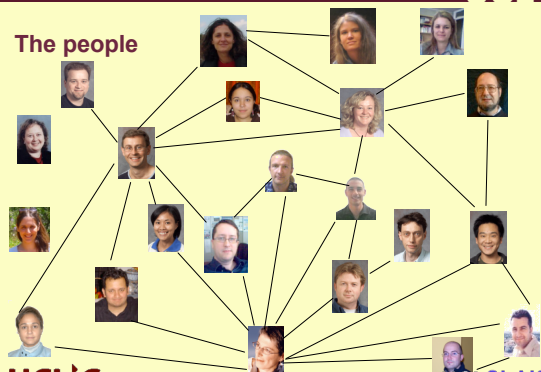




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The people




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Activities

- 6 Faculty, 5 RFs and a few honorary
- MSc HCI with Ergonomics
 - Broad, interdisciplinary, international
 - ~40 p/g students (full and part time)
- Consultancy
- Research



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Research: Some Directions...

- Positive Usability (experience, engagement, immersion - haptic, tangible)
- Affective (emotion, posture, culture)
- Cognitive Science (Visualisation, Error, Concept learning)
- Information (digital libraries, sense making)

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School of Library, Archive and Information Studies

- First of its kind in Britain (1919)
- Staff: 2 Profs, 4 SLs, 12 Ls, currently 2 RFs
- Students: 20 PhDs, 140 Masters, over 100 u/gs
- Masters Programmes covering Electronic Publishing, Library & Information Studies, Archive and Records Management
- U/G mainly Information Management

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Research Activities include

- Centre for Information Behaviour & Evaluation of Research (CIBER)
- Cultural Informatics Research Centre in the Arts and Humanities (CIRCAh)
- International Centre for Archive & Records Management Research & User Studies (ICARUS)
- Working with major archives, libraries and other institutions
- Health Informatics, Log Analysis, Electronic Records, Research Evaluations and user studies

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User-Centred Interactive Search with Digital Libraries (UCIS)

THE TEAM

Prof. Ann Blandford
 Dr Jeremy Gow
 Dr Jon Rimmer
 Dr Claire Warwick

Prof. William Newman
 Dr George Buchanan

Prof. Ian Witten
 Prof. David Bainbridge
 Dr Sally-Jo Cunningham



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Project Research Agenda

- Humanities Scholars' Research Practices (in context)
- Information Management u/g students over their degree (Longitudinal 3 years)
- Develop interfaces (Greenstone) to electronic resources (and test)
- Lawyers

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Mission of the library

“To offer its patrons information available throughout the world...the opportunity to read material from many sources and with many view points.” (ooops can't remember)

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Rationale for digital library projects

- preservation of national heritage (e.g.WW2 books, Tibet)
- widening access
- narrowing searches by confining data set (e.g. C18th English Literature online)
- Improved searching capabilities
- Linking of resources
- Smaller size of technology, increased computational power, reduced costs of memory storage, rise of computer networks

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Types of DL resources

- Documents
- Books
- Journals
- CDRoms
- Software
- Images
- Music (sound) etc



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So it's...generally...

- Structured, managed collections of documents
- With quality assurance
- Often with additional features
- E.g. ACM - Do you use these additional features?

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Pictures

- Organisation of pictures
- Date, occasion, content - people, places, emotions, colours, context



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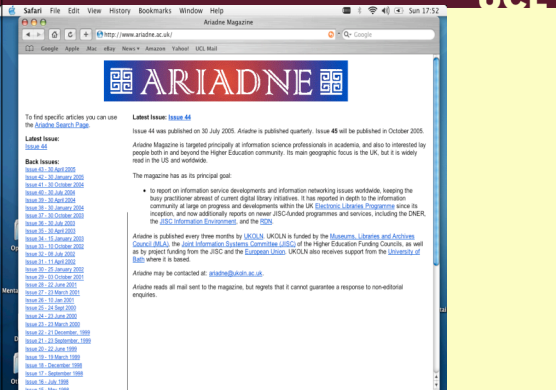
Some Popular DLs

- JSTOR - scholarly journal archive
- Project Gutenberg - 10,000+ US/UK books
- Gallica - French library 100,000 books
- International Children's Digital Library
- British Library

And many, many others


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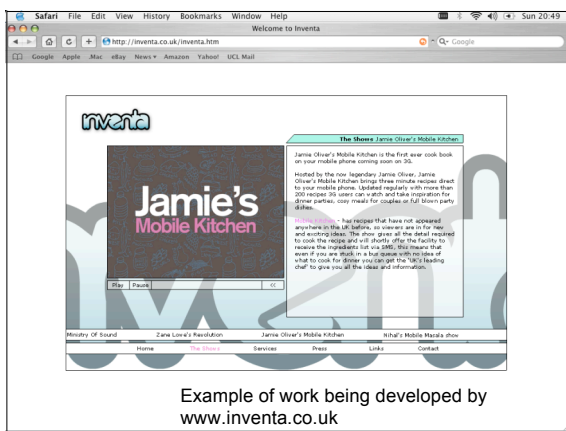


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Example of work being developed by www.inventa.co.uk

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Different priorities and needs

- Developers
- Network specialists
- Interaction designers
- Librarians
- Users (students, teachers, professionals and the curious)

Sciences & Humanities?

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Issues

- Many users have poor information seeking skills
- Insufficient help provided at the interface
- Novel features are hard for users to quickly assimilate
- Number of items returned from a search and the ordering of these items can be unclear to users

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The design challenge

- Creating new possibilities, while...
 - ... addressing existing user needs and practices
 - Hence, understanding use in context, and
 - ... anticipating how users are likely to work with new features

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Humanities Research Practices



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Motivations

- Digital Humanities
- information seeking research - sciences and humanities
- Informing the design of future digital resources to support information seeking in the Humanities
- Generally information moving from the physical to the digital
- Micro\$oft - Google - Yahoo!
- New knowledge economy

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The Interviews

- Sample of convenience - London, Cambridge, Sussex, Bangkok & Sydney (plus New Zealand & Swansea) - 30
- **Get a sense of the nature of the research practices of Humanities scholars - contexts, changes over time, resources used etc.**
- Mix of English, History (and Buddhist studies)
- Wanted to get a sense of how they conducted 'research' from when at school, through to higher exams, undergraduate, postgraduate and beyond
- Likes, dislikes, attitudes, anecdotes etc

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Design

- Semi-structured interviews, generally at their place of work (office) occasionally over a coffee
- Recorded and transcribed

Analysis

- **Broad grained Discourse analysis**
- **Thematic analysis (Whetherell et al 2001)**

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Emerging Themes

Insights into the positive and negative aspects of the Humanities 'research experience'.

- "Sherlock Holmes" - the 'mystery' is investigated by 'chasing up leads'. Difficulty of finding objects, particularly in unmarked boxes.
- Depths of engagement experienced during interaction with the actual source materials.
- How can digital resources best support the work of the research 'Sleuth' and how can the experience of doing so be enhanced to facilitate engagement whilst interacting with technology?

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Emerging Themes

The Physical and the Digital (Real and Virtual)

- **Different experiences in a variety of physical libraries were discussed, and how these research experiences differed to the use of electronic resources was also explored.**
- **What are the qualities of the physical that are often overlooked or difficult to support in an electronic environment?**
- **Do users want additional information such as statistics on use, related material and similar pathways through the information?**

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Quote

Compatibility

"I remember it being quite scary the first few times we went in, and even now sometimes I cannot find things because it's got its own reference system, which is the same with most academic libraries, they don't follow a reference system or model that's anybody else's? And the "X" Library, have you been there? It's the worst, because they are pushed for space...because of precious space they organise things by size of books. So the folio edition and the Octavo editions are all on particular shelves, you get the kind of idea, and then again they have the ledger system."

Emerging Themes

Space, place and people

- The importance of, and problems of, places (libraries, auction houses, book fairs), spaces (e.g. working in particular libraries, layout, ambience) and the relationships with other people (librarians, archivists, book specialists and colleagues with similar interests) were also revealing.
- These findings can be set against electronic resources to see how well they support or hinder these relationships.
- Do these technologies need to consider ways of incorporating additional communication tools to support research communities?

Quotes

"They let you take out any book at all, any period. So I can take out first editions from the 18th Century, you know, which are worth thousands of pounds, which you cannot do anywhere else. And stick it in your bag? You do, you get on the bus and take it home. They take it out of the safe and give it to you nervously and you are away, "try not to get it wet madam" and things are very, very tolerant on how long you keep books for. One of the anecdotes was it took 150 years for a book to be returned, it made it back in the end."

"Do you know about Thomas Carlisle the 19th Century historian? The London Library was set up by a group of academic intellectuals in the early 19th Century, and they set it up because they hated to go to the British Library and not be able to take books out, so they started their own one. They pooled all their libraries and started the London Library up. They used to go there for nice quiet meetings or whatever and this Carlisle was in the reading room minding his own business, and somebody tried to commit suicide by shooting themselves, and he complained to the librarian, she should be more careful who they let into the reading room. If you can't get silence in the London Library where can you?"

Emerging Themes

How resources are assessed

- The criteria scholars used to evaluate resources were often implicit. These interviews revealed issues of accuracy and ease of use for both physical and electronic resources.
- Our prototyped interfaces are exploring ways of expressing, for example, how results are ranked and how the user can interact with the system in order to present the data according to their own preferences.
- Do these technologies need to consider ways of expressing (e.g.) how the results are ranked and how the user can interact with the system to present the data according to their own needs?

Emerging Themes

Embracing technology

- Participants discussed how different sorts of technology fitted into their research practices over the last twenty-five years, including first use of email, and more recently the Web and electronic resources.
- Ease of tracking down work that would have previously been very difficult (diminishing chances of exclusivity)
- Happier to read (for extended periods) from paper rather than the computer screen.

Quotes

Credibility of the source material

"My favourite resources are my texts, my 18th century texts, I like my original text"
 You get a certain something out of the actual original?
 Yes I think we do, I do. For a start you get a certain accuracy which you may not get from a reprint. So the thing is, if you are saying what was Catherine trying to produce, you want to see an addition she would have actually been existent in her lifetime, because I had a situation where I was doing some proof reading for somebody and they said OK we'll use the 1840 version for a 1790 text. And I was only doing simple proof, and what happened in 1840 was this guy's son had re-edited it, had completely chopped loads of stuff out and it was a completely different text. Now you would hope that any modern Cambridge university Press would be much more accurate. But the point is you don't know unless you compare it to the original... Then there is going to be discrepancies between you know certain things, because you know their publishing standards weren't as high, things coming off the press physically nit being digitised, so the chances are Catherine wouldn't have actually seen that the publisher might have changed some things. She would have seen the proofs, and sometimes people like going back to the manuscripts and there will be three or four different manuscripts, so it's like hmmm

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Emerging Themes

Problems with technologies old and new

- Critiques were offered of microfiche, microfilm, CD-Roms as well as library catalogues and Internet search engines.
- By understanding barriers to previous technological take up in general, improved techniques can be developed to promote these resources to the Humanities research community.

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Quote

"It's apparently 250,000 grand to subscribe to X, something like that...but it's a long subscription.
Why is it so much?
 Because it took them 20 years to put the stuff on, to build the database, and they want to make their money out of it...yes I have used it because we had a trial membership, and it is really good, but the problem is again, you can find loads of texts that is going to take you quite a long time to find in the library, so yes they can hone down what you want, but it may just lead to a lot of qualitative analysis of texts. So I can type in Liberty and find, you know, Catherine used it 10,000 times in her eight volumes or whatever, and type in women and she only used that term five times. So that kind of text analysis can be done, but you know, doesn't really mean that you've read the text does it? So I think the good thing is that it will come up with a whole list of books that would be much more difficult for me to find. But really if you just go to a specialist librarian, the chances are they are going to know, if you go to the Bodleian and you speak to somebody who works in or knows your field you can find out as much...(X) found to start with, it was too overwhelming.

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Emerging Themes

The modern researcher and the need for training

- Impact of search engines on the quality of students' work.
- Skills necessary to discriminate between resources.
- How should training be structures, organised and delivered?

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Quote

Advantages and disadvantages of electronic resources.

"I think it would be difficult, kind of difficult to imagine not having them, but at the same time I don't really use them that much. They stop you from having to travel, they enable more people to do research who wouldn't normally be able to that's the main advantages, the disadvantages? They enable more people to do the research so you lose some of that exclusivity (laugh)"

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Advantages and disadvantages (include...)

- Digital Library

Preservation - physical artifacts deteriorate with interaction (environment and people)
 Don't have to wait for it to be returned (always available) - multiple copies and places of delivery - greater accessibility
 Different methods of interaction - enhanced
 Focused areas of search (opposed generic Google) - structured/organised
 Cheaper and can copy faster (without error)
 Obviously advantages of electronic over paper - 'Martini time', archive challenges, wider access...

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Advantages and disadvantages (include)

- Books

Physical - well thumbed (popular, where's interesting?)
 How often has it been taken out?
 How many copies are there?
 What does the review say?
 Look at the picture of the bearded man
 Can see similar products near by on the shelf (serendipity of research)
 Chance encounters with others
 Books easily annotated and can flick through easily

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Limitations of current work

- Privileged (mainly) researchers - would more 'resource impoverished' researchers provide different data?
- Talking rather than observing
- Next work - shadowing PhD English and History students, looking at physical and digital aspects of their research processes...creative loafing!

Thoughts...

Why are people overwhelmed with library catalogues & not Google
 Can a digital library start with a Google-like Interface (please?)
 What about Amazon-like recommender systems?
 Or even seeing the contents page from the catalogue
 Should we be spending so much money on digitization of physical artifacts when maybe Humanities scholars want the pointers to them instead? Old, redundant, un-maintained research projects...
 Revolution in Subscription models - physical and digital
 Digital divide - less travel more collaboration? (Buddhist scholars)
 How do we (well *they*) define digital libraries? eBay, Google, Amazon?

Limitations of DLs

- Real v Virtual
- Interfaces and usability
- Serendipity of search process
- Costs (ScienceDirect \$1million p.a.)
- Copyright etc.
- Technological compatibility
- Traditional relationship between academia and publishers to change?
- Digital divide

Future

- Predicted that artifacts will be relatively less important - access more important than possession
 - Reading old newspapers - microfilm
 - Music performance - recording
 - Theatre stage - cinema
 - Digital reading?
- The old survives but the new is dominant*

Future (2)

- What is true and what is false? Credibility.
- Will smaller universities need to spend money on physical libraries or even faculty?
- Groovy vs Static - one costs more money and time to produce, but what do people want?

Peoples' understanding of a "library"

- Google - cached
- Amazon
- BBC
- eBay
- A professor's homepage?

Thank you!

Comments and Questions?

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Project References

Blandford, A., Adams, A., Atfield, S., Buchanan, G., Gow, J., Makri, S., Rimmer, J., Warwick, C. (In Press) PRET A Reporter: Evaluating Digital Libraries alone and in Context. Information Processing and Management.

Blandford, A., Makri, S., Buchanan, G., Gow, J., Rimmer, J., Warwick, C. (2007) A Library or Just another Information Resource? A Case Study of Users' Mental Models of Traditional and Digital Libraries. Journal of the American Society of Information Science and Technology. 58(3) Feb. 1st 2007

Blandford, A., Rimmer, J. & Warwick, C. (2006) Experiences of the library in the digital age. 3rd International Conference on Cultural Convergence and Digital Technology, November 23-25 2006, Athens.

Buchanan, G., Gow, J., Blandford, A., Rimmer, J. & Warwick, C. (2006) Representing Aggregate works in the Digital Library. Poster presentation in the Proceedings of ECDL, 532-535.

Rimmer, J., Warwick, C., Blandford, A., Gow, J. & Buchanan, G. (2006) User Requirements for Humanities Digital Libraries. Digital Humanities 2006, University Paris - Sorbonne, 5-9 July 2006.

Warwick, C., Buchanan, G., Blandford, A., Gow, J. & Rimmer, J. (2006) Code, comments & Consistency: A case study of the problems of reuse of encoded texts. Digital Humanities 2006, University Paris - Sorbonne, 5-9 July 2006.

Rimmer, J., Warwick, C., Buchanan, G., Gow, J. & Blandford, A. (2006) Humanities scholars' information seeking behaviour and use of digital resources. In Blandford, A. & Gow, J. First International Workshop on Digital Libraries in the Context of Users' Broad Activities (DL-CUBA), Joint Conference on Digital Libraries, June 11-15, Chapel Hill, NC. Pp 19-22.

Rimmer, J., Warwick, C., Blandford, A., Gow, J. & Buchanan, G. (2006) Information seeking in the Humanities: Physicality and Digitality. Physicality 2006: The First International Workshop on Physicality, Lancaster University 6-7 February 2006.

Project References (2)

Buchanan, G., Cunningham, S. J., Blandford, A., Rimmer, J., Warwick, C. (2005) Information Seeking by Humanities Scholars. Proceedings of European Digital Library Conference, September 18-23, Vienna, Austria, Springer Verlag, Lecture Notes in Computer Science. Volume 3652 pp. 218-229

Buchanan, G., Rimmer, J., Warwick, C., & Blandford, A. (2005) Exploring the Digital Library Use of Humanities Academics. Users in the Wild Workshop, Joint Conference on Digital Libraries, June 7-11, Denver, Colorado.

Warwick, C., Blandford, A., Buchanan, G., J. Rimmer, J. (2005) User-Centred Interactive Search in the Humanities. Proceedings of the Joint Conference on Digital Libraries Denver, Colorado, June 7-11, 2005. ACM Publications. pp. 279-81

Rimmer, J., Warwick, C., Gow, J., Buchanan, G., & Blandford, A. (prep) Use of Information and Technology: User Requirements for Humanities Scholars in Digital Library Development.

Gow, J., Buchanan, G., Blandford, A., Warwick, C. & Rimmer, J. (prep) Document Structure in Humanities Collections.

In Prep:
 Rimmer et al (2007) "Googolization" Discussing the affects of modern technology to the work of Humanities undergraduate students.
 Rimmer et al (2007) Examining the qualities of the Physical and the Digital in the Humanities' research practices.
 Rimmer et al (2007) Hinder and benefit: Modern technology and its affect on the Humanities 'Research Experience'.

References

Blandford, A. & Buchanan, G (2003) Usability of digital libraries: a source of creative tensions with technical developments. IEEE Technical Committee on Digital Libraries Bulletin. 1(1)

Borgman, C. (1996) Why are online catalogs still hard to use? JASIS 47(7), 493-503.

Harter, S. (1997) Scholarly communication and the digital library: Problems and issues. Jnl of digital information. 1(1).

Lesk, M. (2005) Understanding Digital Libraries. 2nd Edition. Morgan Kaufmann

References cont.

Lynch, CA. and Garcia-Molina, H. (1995). Interoperability, scaling, and the digital libraries research agenda: a report on the May 18-19, 1995 IITA Digital Libraries Workshop.

Shiri, A. (2003) Digital Library Research: current development and trends. Library Review. 52(5), 198-202

Theng, Y., Mohd-Nasir, N. (2000) Purpose and usability of digital libraries. ACM 5th Conf on Digital Libraries proceedings.

Winograd, T. (1995) Digital vs Libraries: Bridging the 2 cultures. ACM SIGIR conference Seattle.