

The Past and Future of Digital Humanities-

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DARIAH-GR: Developing a Greek Research Infrastructure
for the Humanities – DYAS

Session on:

Perspectives on Digital Humanities and Digital Culture

Academy of Athens, Athens, Greece

7 April 2014



UNIVERSITY OF TORONTO
FACULTY OF INFORMATION

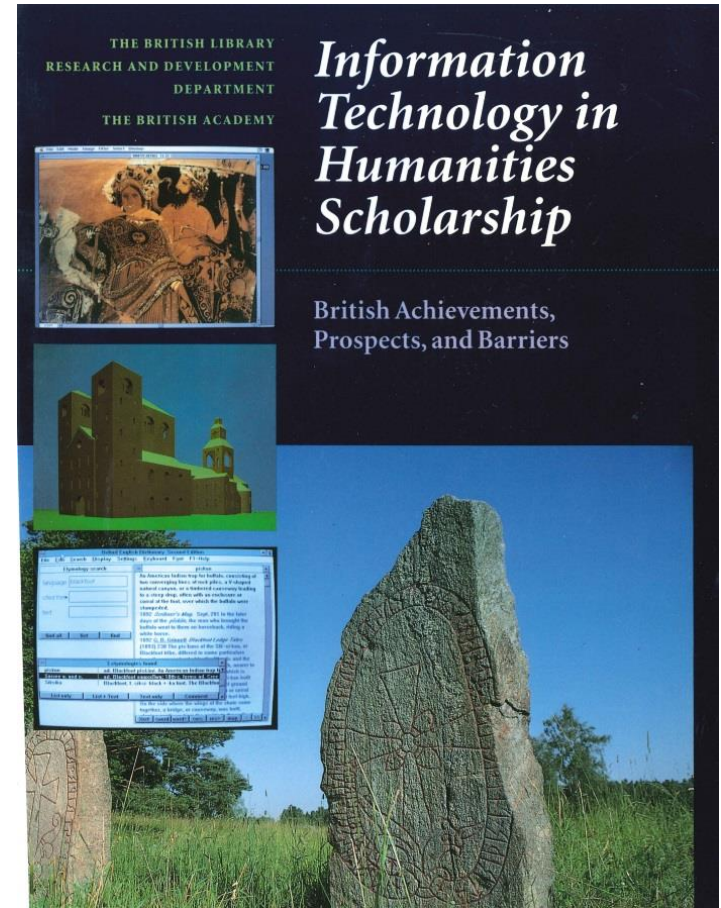
Our Focus....

- “...Twenty-one years ago The Humanities Information Review Panel, which had been convened by The British Academy and the British Library, released its report “*Information Technology in Humanities Scholarship: British Achievements, Prospects, and Barriers*” co-authored by Seamus Ross and Mary Feeney. The report charted the work that had been done in digital humanities over the previous thirty years and examined the strategic, infrastructural, and scholarly requirements needed to support the continued growth of digital humanities as mechanism for ensuring excellence and innovation in digital humanities scholarship. ..”



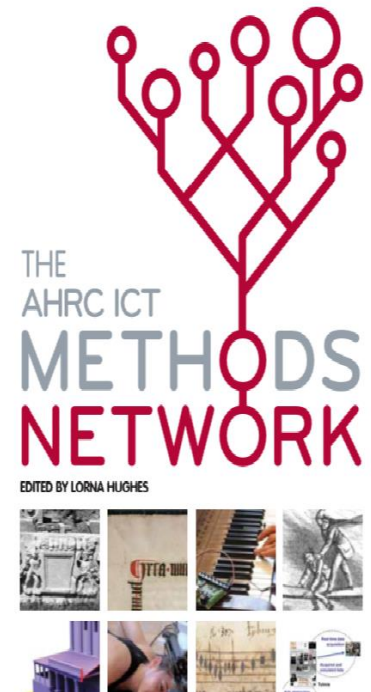
Humanities Information Review Panel, 1992-1993

- Recognised change to “information and communication practices” in response to technological opportunities
- Noted (a) creation and provision of resources, (b) investigation of hypotheses, and (c) testing of models



Other Visions--

- Many other studies— but three worthy of mention—
- **Information Technology in Humanities Scholarship: Achievements, Prospects, and Challenges— The United States Focus (1997),**
http://archives.acls.org/op/37_Information_Technology.htm
- The AHRC ICT Methods Network – Final Report, Susan Hockey and Seamus Ross, 59-74,
<http://www.methodsnetwork.ac.uk/publications/final-report.html>
- Classic article from Greece's own Costis Dallas, *Humanistic research, information resources and electronic communication*,
<http://www.let.leidenuniv.nl/wgbw/Eltext/dallas.html>
- **'That full complement of riches': the contributions of the arts, humanities and social sciences to the nation's wealth : A British Academy review, 2004,** <https://www.britac.ac.uk/policy/full-complement-riches.cfm>



Some Thoughts from Hockey & Ross (2008)

- “...essential that the production of scholarship using ICT is not jeopardized through lack of expertise, lack of awareness of possibilities, or organizational obstacles.”
- “Alongside education and training, ... [it is] essential ... researchers are provided with the opportunity to see demonstrations of new tools and techniques.”
- “Digital projects would not exist without technology and tools, but ... technology ... often remains invisible, and it is difficult to obtain information about it.”
- In 1990 “...the eminent philosopher Sir Antony Kenny noted six obstacles to the widespread adoption of ICT methodologies within the arts and humanities; one of these was ‘diversion of effort’.”
- “The sustainability of tools over the long term is of critical importance, and must be considered at the outset of a project.” This includes end-user support.
- Access to specialist support. -- Although differently educated humanities scholars are what is really needed.



Impact of Digital Humanities on
humanities scholarship has been
limited



Breadth of Humanities

- Literary and Linguistic Studies (text editing, linguistic analysis)
- Historical Studies
- Archaeology
- Media Studies (e.g. film/cinema studies)
- Philosophy
- Language Studies



Key Challenges remain....

- Training and Support
- Project Management & Collaboration
- Research Infrastructure (e.g. tools, preservation services, registries)
- Digital Libraries and Archives
- Standards
- Funding
- Support
- Intellectual Property Rights
- Preservation and Curation
- Information Resources

Ross and Feeney 1993 and Pavliscak, Ross & Henry 1997 – and many others



What do we do...

- Data discovery and selection
- Data interpretation
- Data representation
- Data analysis
- Knowledge creation
- Knowledge representation
- Knowledge use – making it functional



Jumping-off point (Hockey & Ross, 2008)

- “The new research that has been enabled by ICT has not been merely based upon the application of ICT to humanities and arts scholarship, but **has depended upon the development of new kinds of resources**, such as large corpora in literary, linguistic, musicological, and television and film studies domains, the digitization and digital-encoded representation of materials in classics, history, literature and history of art, and the creation of databases in archaeology and the performing arts. This recognition that the future generations of **scholarship in the arts and humanities will depend upon the accessibility of a vast array of digital resources in digital form is becoming more widespread.**”



Diversity of Resources classes



Examples of digital evidence

	Performance as 'text'	Subjectivity and agency	Performance as product of society
Pre-text	PDF of musical score	Miller's preface to <i>The Crucible</i>	Comparison of dance notations across time/cultures
Process	3D models showing ideas for set designs	Scanned image of a director's notes on the script	Scanned newspaper clippings which led to a devised work
Performance text	Digital video of a performance	Interviews with audience members	Motion capture data which was used to transmit a dancer's movements over a network
Post-text	Scholarly analysis of the mise-en-scène of a play	'Word of mouth' publicity	Newspaper review of a concert
Context	PDF of a glossy programme from a West End musical	Statistics on whether 'A-list' stars increase box-office take	Text detailing the compulsory dress code for orchestra musicians

From D Abbott and S Ross: *The Creation and Use of Digital Collections for Performing Arts* (2007)
www.ahds.ac.uk/performingarts/news/reports/cr_i_slides.ppt



Divergence between Availability and Need

Existing digital resources

	Performance as 'text'	Subjectivity and agency	Performance as product of society
Pre-text			
Process			
Performance text			
Post-text			
Context			

Some resources

Most resources

Desired digital resources

	Performance as 'text'	Subjectivity and agency	Performance as product of society
Pre-text			
Process			
Performance text			
Post-text			
Context			

Most sought-after types of digital resource

From D Abbott and S Ross: *The Creation and Use of Digital Collections for Performing Arts* (2007)
www.ahds.ac.uk/performingarts/news/reports/cr_i_slides.ppt

Retroconversion & Digitisation



VII giornate di studio del CNBA, 2001

Programmes will...

- Focus on the sources
 - content (e.g. possible purposes)
 - physical qualities (size, nature & condition of sources)
- Focus on creating assets of enduring value
 - sustainable, scalable, durable, reusable
- Ask whether the appropriate technology is available
- Consider how material will be selected for digitisation—what priorities will be used
- Risk adverse
 - only material not put at risk but all key material at risk of loss
- Depend on collaboration, co-operation and inter-institutional activities and national if possible.

Seamus Ross—Building digital collections for architectural studies, HATII

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Content Needs....

VII giornate di studio del CNBA, 2001

EU Experts Identified Digitisation Needs

- improve and reinforce the co-ordination of digitisation activities across Europe;
- enable the efficient and effective use of digitisation to open up Europe's unique and significant wealth in its cultural and scientific heritage;
- reduce, if not eliminate, redundancy and fragmentation of effort, divergence of technical approaches, and waste of financial resources;
- facilitate the creation of Europe's eContent industries;
- capitalize on the investment made digital resources creation;
- ensure visibility and interoperability of the resources;
- deliver digital assets that promote and reflect cultural diversity; and,
- bring cohesiveness and shared vision to what is currently a fragmented area of activity.

Seamus Ross—Building digital collections for architectural studies, HATII

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Creating data Resources (examples)

- Thesaurus Linguae Graecae,
<https://www.tlg.uci.edu/>
- Prosopography of the Byzantine Empire,
<http://www.pbw.kcl.ac.uk/>
- Lexicon of Greek Personal Names (e.g.
<http://www.lgpn.ox.ac.uk/online/>)
- databases of Greek Epigraphic inscriptions:
 - <http://epigraphy.packhum.org/inscriptions/main>
 - <http://www.epigraphik.uni-hamburg.de/database>



What Should Humanities Research Be in the Digital Age

- Data enabled, if not driven (Corpus of Romanesque Sculpture, <http://www.crsbi.ac.uk/>)
- Experimental (e.g. virtual reality, performance studies, simulations)
- Knowledge focused
- Outputs should be data resources and functional knowledge representations.



Knowledge Representation

- 1997: “progress by humanists in the coming decade in developing shared methods of knowledge representation”
 - (Pavliscak, Ross, & Henry 1997)
- Very little progress, but then again the idea was not new then – it was nearly 40 years old



Jean-Claude Gardin

- AI in Archaeology
- Representation of Knowledge in Archaeology
- Formalisation of knowledge
- Explicit representation of reasoning



The Past Promise of Knowledge Representation

- “...failed to achieve its promise ranged from
 - the poor quality of knowledge extraction strategies,
 - the lack of fundamental representation methodologies,
 - the limited applicability of methods to knowledge domains,
 - the problems of boundary constraint and creep,
 - to the high costs of developing applications”.

Seamus Ross, Position Paper: Towards a Semantic Web for Heritage Resources, *Digicult Towards the Semantic Web for Heritage Resources*, 2003, p 10.

www.digicult.info/downloads/thematic_issue_3_low.pdf



Flat_ring_headed rule:

```
if ident_rate = probable | maybe
and Metal Type = copper alloy | iron
and Metal Manufacturing Process = cast | forged
and Head Type = flat plate
and Collar Type = fillet collar
and Shaft Form = plain tapering
then Type = Flat_ring_headed fillet collar Type XIV.
    subtype1 = unavailable. \Only Temporary
endif.
```

Flat_sheet expanded headed type XV rule:

```
if ident_rate = probable | maybe
and Metal Type = copper alloy
and Metal Manufacturing Process = folded Or rolled | forged
and Head Type = swivel ringed | flat plate
and Flat Plate Head Form # oar_shaped
then Type = Flat_sheet expanded headed type XV.
    subtype1 = unavailable. \Only Temporary
endif.
```

Short spatulated expanded headed type XVI rule:

```
if ident_rate = probable | maybe
and Metal Type = copper alloy
and Metal Manufacturing Process = cast
and Head Type = flat plate
and Flat Plate Head Form = spatulate plate | disc
and Attachment Device = present
then Type = Short spatulated expanded headed type XVI.
    subtype1 = available.
endif.
```

Hook_headed type XVII rule:

```
if ident_rate = probable | maybe
and Metal Type = iron | copper alloy
and Metal Manufacturing Process = cast | forged
and Head Type = other
and Basic Other Head Form = bent wire
and Bent Wire Form = hook_end
then Type = Hook_headed type XVII.
    subtype1 = unavailable.
endif.
```

Loop_headed type XVIII rule:

```
if ident_rate = probable | maybe
and Metal Type = iron | copper alloy
and Metal Manufacturing Process = cast | forged
and Head Type = other
and Basic Other Head Form = bent wire
```



Knowledge Representation and Anglo-Saxon Dress Pins

- Detailed analysis of Anglo-Saxon dress pins
- Long discursive analysis of function and role of these dress fasteners
- Knowledge representation to render knowledge functional -- system knew everything the author knew about Anglo-Saxon pins
- Representation of knowledge as logical and functional arguments, which are represented in testable ways

Ross, Seamus, (1992). Dress pins from Anglo-Saxon England. DPhil. Univ of Oxford.
<http://ora.ox.ac.uk/objects/uuid%3A3976b772-fccd-41fe-b8c7-f4ae08ac0295>



Future Directions

- Digital Humanities needs to:
 - Shift scholarly behaviour and practice—new way of thinking about how humanities scholarship is done and presented.
 - Transition from document-based scholarship to data founded scholarship
 - Produce scholarship which involves the development of substantial data resources which can be rendered interoperable to enable the pluridisciplinarity of research and knowledge discovery
 - Reward the production of ontologies and functional knowledge representations rather than modes of scholarly production which favour the opaqueness and non-functional nature of knowledge
 - Theoretical developments in digital humanities

