Teaching the Digital Humanities through Virtual Research Environments

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ABSTRACT

At the core of the work done within the digital humanities is a difficult interdisciplary relationship between the at times divergent cognate fields of computer science and the humanities. This presentation will discuss some of the central characteristics of the digital humanities whilst examining some of its 'hard-interdisciplinary' relationships. The author will suggest a model where 'hard-interdisciplarity' may be taught and assessed; through the framework of Virtual Research Environments (VREs). The presentation will demonstrate some of the latest work in the development of VREs in the humanities that encourage the critical use and analysis of the digital objects within them. It is the contention of the author that building 'hard-interdisciplary' relationships between humanities and computing technology should engender a critical and deeply scholarly understanding of technological production and VREs are one way to achieve this in the classroom.

INTRODUCTION

Like many interdisciplary fields within the humanities, the digital humanities consists of a broad range of researchers arriving within its fold from a range of disciplines practices. These may include disciplines as diverse as Papyrology, Media, Musicology, Classics, Epigraphy, Medieval Studies, History and Classical Archaeology. Although definitions vary between schools and schools of thought, humanities computing, or 'digital humanities' as is now more popularly know, may be broadly defined as the application and development of computational methods and associated tools to address research problems within the humanities. Often distinct from general computing approaches, the digital humanities is an interdisciplary field of applied and experimental computing that advances the research concerns of the disciplines and sub-fields that make up the humanities. The methods employed in the field may be used to uncover new knowledge about corpora or to visualise historical research data in such a way as to uncover additional insights and meaning. The digital humanities is about structuring, analysing and communicating humanistic knowledge in a critical and authorial way using computing technology.[i]

As a field the digital humanities has traditionally lacked an institutional base to support long-term research strategies but has by way of historical circumstance produced some of the most intrepid 'hard-interdisciplary' scholars anywhere in the academy. This has resulted in many impressive contributions to original scholarship through for instance; the relationship between 3D scanning and epigraphy, grid computing and history, or text encoding and medieval studies. Many of the outputs of this relationship are published in the peak Journal in the field, LLC: the journal of digital scholarship in the humanities.[ii]

It is these interdisciplary arrangements—of researchers coming to the table to build something new—that is the hallmark of the digital humanities field (Ramsay: 2011).[iii] This has been the case ever since 1949 when Roberta Busa began the Concordance of Thomas Aquinas (1275 1274) in conjunction with Thomas J Watson, the founder of IBM. The tool he created for performing text analysis within the massive corpus of Aquinas took 30 years to complete. [iv] Later interdisciplary configurations have uncovered new knowledge about disputed texts, provided heuristic frameworks for the analysis of the Fine Rolls of Henry III in England and produced new understanding about Roman theatres using advanced visualisation methods.[v] It is these two distinct qualities of the field; hard-interdisciplinarity and building computing projects, which are core to the teaching and research efforts within the field. Students with these qualities are able to engage with the plethora of digital resources available from the World's great archives and advance their meaningful interpretation and production. In other words the digital humanities make humanists that make things and through making them; they learn about them.

VRES IN THE CLASSROOM

Previous digital humanities project were primarily about constructing databases and large-scale digital libraries, however, new-generation digital humanities projects are not just about hastily making data available through databases or digital libraries, but are about creating scholarly, interpretive frameworks to make sense of this data. These frameworks allow information to be conceptualised, visualised, analysed, and collaboratively worked upon in order to address questions often never thought possible. They facilitate team and project-based work, highly suitable for the digital humanities in the classroom. In fact, the more transformative effects of digital humanities innovations have been through collaborative team-work and the ability to re-use and relate data through these capacities; again highly desirable for educational purposes. Some innovative examples include:

- UCLA's *Hypermedia Berlin* (2008), a research platform and interdisciplinary collaborative environment for analysing the architectural, cultural, and urban history of Berlin over an 800 year period.[vi]

- At the University of Queensland (2011), their Aus-e-Lit project is building a system for classroom teaching and research of a Australian literature and print culture and offers:

  ". . .compound object authoring, editing and publishing services, collaborative annotation services, data integration and search services. empirical reporting services."[vii]

  And:

- *TAPor* (2011) TAPoR *"...is a gateway to tools for sophisticated analysis and retrieval, along with representative texts for experimentation. TAPoR has built a unique human and computing infrastructure for text analysis across Canada by establishing six regional centres to form one national text analysis research network. One of the major projects of the network was the development of the portal. This portal is a gateway to tools for sophisticated analysis and retrieval, along with representative texts for experimentation....[viii]*

A VRE is usually not one technology, but is a set of tools and methods assembled in one place to assist students to manage and model research. VREs are extendable, flexible, and work on a common framework that can be altered to support the needs of specific teaching and research scenarios. A VRE does not have to be 'large' because it can support underlying research processes within sub-disciplines or can be constructed around a particular set of research questions and teaching scenarios. A most importantly, a VRE is especially useful for research fields not accustomed to advanced computational methods because it can support knowledge transfer in an opaque way by not just making data available, but by making it available in a way that allows for contextual critique and analysis.

In this presentation, the author will demonstrate a number of VREs in or under development in Australia and internationally and demonstrate how they may be used to teach digital humanities research in the classroom. The meaningful use of digital objects within VREs is one ways to further the appropriate use of computing within humanities teaching and research endeavors.

REFERENCES

[i] For a list of definitions of the humanities computing/digital humanities, by those working in the field, see: 'How do you define humanities computing/digital Humanities'
Tapor Wiki, Geoffrey Rockwell and John Newman, University of Alberta, Canada,
<http://tapor.ualberta.ca/taporwiki/index.php/How_do_you_define_Humanities_Computing_/_Digital_Humanities%3F#How_do_you_define_Humanities_Computing_.2F_Digital_Humanities.3F_.282009.29> (Accessed 21 May 2011).
[ii] LLC, Oxford Journals, <http://llc.oxfordjournals.org> (Accessed 21 May, 2011).
[iii] Stephen Ramsay, UIUC, 'On Building'
<http://lenz.unl.edu/wordpress/?p=340> (Accessed 21 May, 2011).
[iv] Father Roberto Busa, Catholic University of the Sacred heart, Milan, <http://itreebank.marginalia.it> (web version available since 2005)
[v] Fine Rolls of Henry III, Centre for Computing in the Humanities, Kings College London and partners,
<http://www.finerollshenry3.org.uk/home.html> (Accessed 21 May 2011).
[vi] Hypermedia Berlin, John Maciuika, UCLA,< http://www.berlin.ucla.edu> (accessed 21 May, 2011)
[vii] AUS-e-Lit, University of Queensland, <http://itee.uq.edu.au/~eresearch/projects/aus-e-lit> (accessed 21 May, 2011).
[viii] TAPoR, (Text Analysis Portal) Geoffrey Rockwell, University of Alberta,< http://portal.tapor.ca>
 (accessed 21 May, 2011) See Geoffrey Rockwell's description of the project on Arts-humanities.net, King's College London
<http://www.arts-humanities.net/projects/tapor_text_analysis_portal_research> (accessed 22 May 2011).

ABOUT THE AUTHOR

Dr Craig Bellamy (eResearch Analyst; VeRSI)

Craig Bellamy has a research background in history and has worked work at the intersection between computing technology and the humanities for a number of years. He has a MA in history (history and hypertext) and a PhD in history and new media (interactive hypertextual video). He has worked at a number of leading digital humanities centres in the US and the UK (including King's College; London, and the University of Virginia) and is Secretary for the recently formed Australasian Association for Digital Humanities. At VeRSI, he promotes the use of computing within the humanities through the development of a number of innovative projects and activities.