Knowledge Networks in the Humanities

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Citation


Abstract
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1. Introduction

In settings where digital humanities thrive, there are common ingredients, including strong structures for collaboration, frameworks for interdisciplinary dialogue, spaces for experimentation, and mechanisms for institutionally valuing and sustaining digital research activities. This paper asks: How are digital humanities knowledge networks formed, what shapes to do they take, and what can they achieve? It explores the many ways in which digital humanities communities form and collaboration can be fostered—locally, nationally, and internationally—with a focus on the Australasian context.

The technological advances of recent decades have radically changed the ways that we harness, utilise, and communicate our combined cultural knowledge and records. Across all disciplines, innovations in computing and media have had a transformational effect on the production of knowledge and on research methods and practices. A key factor has been the exponential expansion of digital resources along with greater accessibility, along with the development of new tools for presenting and analysing information and, most importantly in the context of this paper, for sharing information. For the first time in the history of the humanities, practical solutions to the challenge of overcoming research isolation, epitomised in the figure of the lone humanities researcher, are readily available.

Although computers have been used in humanities research for more than 50 years, the benefits of digital tools and methods, especially those that have evolved over the past two decades, have only recently begun to be widely understood in the academic community. This is in spite of the fact that in some circles, there was a very early awareness of the value of computing in the humanities. As noted in the American Council of Learned Societies report, Our Cultural Commonwealth (2006), the following statement, from the American Council of Learned Societies (ACLS) in 1966, remains relevant today:
“Of course computers should be used by scholars in the humanities, just as microscopes should be used by scientists. . . . The facts and patterns that they—and often they alone—can reveal should be viewed not as the definitive answers to the questions that humanists have been asking, but rather as the occasion for a whole range of new and more penetrating and more exciting questions.”

40 years on, Our Cultural Commonwealth was a call to action for the humanities sector. It argued that a better coordinated approach to managing and building the online information commons was an urgent priority and a responsibility to be taken seriously. The report notes that ‘with many new works [of scholarship] accessible and understood only through digital media’, purpose-designed solutions must be developed for the humanities sector; the ‘creation, curation, and preservation of information’ requires advanced systems, but these cannot simply be borrowed from the sciences.

Similar concerns were noted in the European context. However, the field of digital humanities now extends far beyond the technical arena. It reaches into other more personal areas of research to consider how everyday life, work, relationships, privacy, memory, and identity are being affected by the increasing adoption of digital devices and resources. In a recent article in the *Australian*, Alan Dupont provides some telling statistics: ‘Three billion people, about 40 per cent of the world’s population, are connected to the internet. Mobile penetration is even greater, with seven billion subscriptions globally, half of them in Asia and the Pacific, and this, as he points out, is only eight years after Apple released its first iPhone. At the heart of these developments is connectivity: ‘people-to-people connectivity across time, space and even linguistic barriers’ and also connecting machines with machines—‘the internet of things’. By the end of 2015 it is estimated that about 15 billion devices will be connected to each other, excluding computers and mobiles. Digital humanities research is exploring this new, deeply interconnected world, and in doing so it is establishing connected communities of researchers—global, regional, and local.

In this paper I discuss the building of digital humanities communities in three ways. The first focuses on building networks and associations of people; the second looks at the role that very large and sustained projects can play in drawing people together; and the third considers institutional frameworks that can facilitate digital humanities research, practice, and pedagogy within universities or other research institutions. I will draw my
examples mainly from initiatives I have been involved with in Australia. Although there are numerous major Australian projects, some spanning many decades, the Australian research community has only recently coalesced around digital humanities as a field. This national experience, which shows a pattern of development that is mirrored in other places, is used here as a case study of building digital humanities communities.

2. Definitions

Digital humanities—a term that is now more widely used than its predecessor ‘humanities computing’ and variant ‘e-humanities’—has grown up in an era when technological transformations have touched every aspect of our lives. Digital humanities has multiple definitions. Some argue that it is best understood as a discipline; others prefer the term ‘inter-discipline’ because it suggests a space of intersecting influences. In either case, digital humanities is a field that is enabled by new technology and media, and is in a state of continual change and transformation. Most would agree that it is a highly interdisciplinary space of interaction between humanities, social sciences, and computing. At a basic level the term ‘digital humanities’ refers to the application of computing, in its many forms, to humanities research questions. It describes the use of digital methods and techniques to develop deeper and richer understandings that would not have been possible otherwise.

In my president’s welcome, at the time of the formation of the Australasian Association for Digital Humanities in 2011, I defined digital humanities as:

"the application and theorisation of computing to develop greater understanding of complex cultural and social phenomena. This includes employing and designing tools for data analysis, formats, and approaches to support new methods of inquiry, and ensuring the preservation of digital records and cultural heritage."

The field and the understanding of the term have been expanding to accommodate a surge of worldwide interest and activity over the past five years. Digital humanities has become a point of connection between research communities operating in very different national contexts and is therefore serving as a means of global linkage, promoting and opening up possibilities for a higher degree of international collaboration than ever
As the field adapts to and incorporates new areas, it is also developing its parent discipline of computer science and posing new questions to it from other disciplines. This interdisciplinarity brings with it many challenges, including adapting institutional structures to support boundary-spanning work. This is not always easy. In some situations it may require changes in long-established corporate practice relating to such issues as governance, funding, and staff recruitment, and it will certainly require commitment and investment. In the settings where digital humanities thrive, common ingredients can be identified—specifically institutional frameworks and policies that prioritise this research focus, a critical number of engaged staff, the capacity for experimentation, and mechanisms for institutionally valuing these endeavours.

### 3. Australian Context

In Australia, digital humanities activities have greatly increased over the past decade, since the first Computing Arts conference in 2001 and the e-Humanities Gateway launch of its major online database of Australian digital projects in 2002.⁹ Many Australian cultural and collecting institutions embarked on major digitisation projects at around this time. From 2004 onwards they began to incorporate social media functions and early forms of crowdsourcing to enhance digital resources through public engagement and input. In 2007 the inaugural eResearch Australasia conference featured presentations from humanities researchers alongside scientists and information technology experts.¹⁰ These included an interim report from the Australian Academy of the Humanities on a major survey, undertaken over the previous year, gauging attitudes to and areas of adoption of, new technologies in the humanities.¹¹

Since 2007 the eResearch Australasia conferences have been held annually, with humanities research as a key component. Also in 2007 the Australian Academy centred its annual symposium on the theme of ‘Humanities Futures: New Methods and Technologies for Humanities Research’ to address directly the impact of technological innovation across the disciplines of the humanities.¹² In 2008 the Academy completed a scoping study, ‘Towards an Australian Humanities Digital Archive’, on the development of a national scholarly digital archive for the humanities, and very recently —in
2014– an important report was launched in Australia, also facilitated by the Academy of the Humanities, 'Mapping the Humanities, Arts, and Social Sciences in Australia’. This follows the mould of earlier-published ‘Mapping the Sciences’ reports. While it does not include a category for digital humanities activities, the report provides a resource for tracking, under the various listed disciplines, the increasing interest in digital methodologies and themes at this moment in the history of digital humanities.

Australia is set apart from many other countries in that its research community relies almost entirely on government funding. The government takes a distributed national approach to research infrastructure provision that is unlike that taken in the United States or Europe but suits the country’s very large land size and relatively small population. Over half a billion dollars of federal government research funding has been invested over the past decade. For this reason Australian digital humanities is closely aligned with the broader national eResearch agenda. State-based eResearch agencies such as the Victorian eResearch Strategic Initiative (VeRSI) and, in the state of New South Wales, Intersect, routinely work in conjunction with national programs such as the Australian National Data Service (ANDS) and the National eResearch Collaboration Tools and Resources (NeCTAR) Project, to support digital humanities initiatives and infrastructure development in the higher education and cultural sectors. A major advantage of this centralised system is that resources tend to be designed at the outset for collaboration and interoperability.

4. Building Networks—Australasian Association for Digital Humanities

The most powerful catalyst for building a local digital humanities community is to engage with and join an established digital humanities association, and encourage co-researchers to join. This has the effect of providing instant connections with people, projects, resources, ideas, and events. The Alliance of Digital Humanities Organisations (ADHO) is a worldwide network that has Constituent Organisations (local chapters) in many regions of the world. These include the European Association for Digital Humanities (EADH), the Association for Computers and the Humanities (ACH), the Canadian Society for Digital Humanities / Société Canadienne des Humanités Numériques (CSDH/SCHN), centerNet, the Japanese Association for Digital Humanities (JADH), and the Australasian Association for Digital Humanities (aaDH).
The Australasian Association for Digital Humanities was established in March 2011, the outcome of a workshop sponsored by the Australian Academy of the Humanities, which brought together 40 leading researchers, project directors, and sector representatives. Two international guests, Professors Ray Siemens (Canada Research Chair in Humanities Computing at Victoria University) and Patrik Svensson (director of HUMlab, the digital research centre at Umeå University, Sweden) attended the workshop. At the meeting the broad aims of the association were determined as follows: raising profile; policy advocacy, lobbying, and influence; enlarge the field; collaborate; provide career development and professional advice; act as a ‘methodological commons’.  

The association provided a formal structure that would strengthen the digital humanities research community in the region of Australia, New Zealand, and Asia. Most importantly it provided a mechanism for people to identify their work with this area, typically alongside their traditional discipline. Acting as a communication hub, the aaDH also wanted to attract and energise research in a field where technical innovation and related cultural transformation were rapidly outpacing understanding of the impacts of these developments. The aaDH was quickly able to connect digital humanities researchers and give them a sense of belonging to a worldwide community of researchers in a field that was, and to some extent still is, below the radar of many institutions and governments. In a practical sense this meant distributing information, publicising conferences and other professional development opportunities, promoting research groups and ideas and providing international leverage for local projects and initiatives:

“The mission of aaDH is to promote and contribute to the development and advancement of digital research methods in the humanities, arts, and social sciences. Its vision is to raise the profile and representation of digital humanities in Australasia by fostering exemplary research and supporting a growing community of practice.”

While the aaDH was initiated and conceived of as an association primarily for members in Australasia, the majority of its members are in fact from farther afield. These are the hundreds of people who have taken out joint memberships to all the constituent organisations within the ADHO. Indeed the aaDH’s purpose in applying to join the ADHO was to enable members to connect with and contribute to a global conversation about the development of digital humanities. Facilitating strong international engagement, the underlying rationale for setting up the association, has remained a primary guiding principle.
In March 2012 the aaDH held its first conference, with the theme of ‘Building, Mapping, Connecting’, at the Australian National University in Canberra. Over 250 delegates, from Australia and New Zealand, as well as the United Kingdom, Europe, Asia, and North America, attended the conference and workshops. The event was made possible with the major sponsorship of the Australian Academy of the Humanities and additional sponsorship from the Australian National University. The Department of Digital Humanities, King’s College London, provided support for workshop and conference presenters, and a workshop grant was also received from the Association for Literary and Linguistic Computing, now the European Association for Digital Humanities. The first conference goal —implicit in ‘building, mapping, connecting’— was to establish connections between research groups and individuals within and between participating countries in Australasia. The next was to identify specific international opportunities for digital humanities project collaboration. Finally, the conference sought to enable collaboration between the humanities and the sciences. A powerful symbol of this third goal was the conference venue itself—the beautiful and iconic Shine Dome of the Australian Academy of Science. Feedback from conference delegates indicated that the conference had been successful in raising awareness of digital humanities work in Australasia as well as building new communities of interest, creating opportunities for new research collaborations, and showcasing research in the region to a wider international audience.

The second conference of the aaDH, with the theme of ‘Expanding Horizons’, was held in March 2014 at the University of Western Australia, with around 150 people attending. Each conference has provided a chance to gauge what digital humanities means in our region. The range of papers offered for the first conference represented strong engagement from the Australian government and from national collecting institutions, with a strong emphasis on national issues and projects, reflecting the setting in the national capital, Canberra. The second was organised by a professor of e-research, and so had a different tone. Its emphasis was on strengthening and highlighting interconnections with e-research in Australia and also New Zealand, where e-research is very much aligned with digital humanities, especially in terms of its funding.

5. Australian Projects

In Australia, major institutional projects, as well as smaller but often equally
innovative projects, have contributed to the broader development of the
digital humanities field. As is the case in many parts of the world, these tend
to be associated with particular research centres or groups, and are usually
collaborative enterprises. Some of the most successful and enduring have
been financially supported beyond their initial funding rounds. Long-term
projects in the field include: Austlit: The Australian Literature Resource; the
Australian Dictionary of Biography; the projects of the Archaeological
Computing Laboratory (later Arts eResearch) at the University of Sydney,
built on the Heurist reference database system; projects of the e-research
group at the University of Queensland; PARADISEC (Pacific and Regional
Archive for Digital Sources in Endangered Cultures); the projects of the e-
Scholarship centre at the University of Melbourne, using the Online Heritage
Resource Manager (OHRM). Ground-breaking research has also been
undertaken at the Centre for Literary and Linguistic Computing at the
University of Newcastle, where John Burrows pioneered techniques in
stylometry.

In 2014 I participated, as regional editor for Australasia, in the ‘Around DH
in 80 Days’ project. Australasia’s top nominated projects included some
named in the list above, and many new additions. Project suggestions were
crowdsourced on an open Google Doc, and the suggestions were then
grouped into regions and ranked by various criteria, including technical
innovation, significance to a national or regional identity or sense of place,
and user uptake and interest. The project was initially pitched in these
terms:

“DH80 hopes to be a fun way to introduce the work of colleagues around the
world to those who are just starting out. Every day for 80 days we will visit a
group across the globe. An editorial board will select a total of 80 groups,
one for each day. Groups in the list will be approached to describe
themselves and highlight projects in 200 words or less. We will do our best
to bring attention to digital scholarship outside of Canada, Europe, the US
and Japan. In that sense, we are departing from a broad and inclusive vision
of DH —always-already as they say. Besides the audience of beginners, the
global scope of the tour should also attract some of the more seasoned
DH’ers. The greatest challenge of the editorial board is to balance the
geographical margins with the greatest-hits of the mainstream.”

Selected Australian projects included:

• The Humanities Networked Infrastructure Project (HuNI), a very
large aggregation and social linking project funded through the NeCTAR
(National eResearch Collaboration Tools and Resources) project of the Australian government.

- **Digital Haarlem**, a project of University of Sydney that uses the Heurist database system and depicts everyday life in Harlem between 1915 and 1930).
- **TROVE**, the major national digitisation, discovery, and aggregation project for resources relating to Australia, created and maintained by the National Library of Australia.
- **Deepening Histories of Place**, the largest multi-institutional digital cultural project for Aboriginal knowledge management attempted in Australia that deals with the complex and ethically sensitive issues facing digital humanities around access control and cultural heritage.

A common theme that links these diverse projects is the goal of capturing, preserving, building upon, and articulating the richness of Australian culture and history for current and future generations. These examples of large-scale collaborative projects provide only a sample snapshot of activity. Many other national and state digitisation programs led by libraries and museums are increasing researcher and public access to a wealth of otherwise hidden resources. In Australia, as elsewhere in the world, there is a very strong connection between digital humanities and the cultural sector. An area of strength in our region that I would like to highlight is digital cultural research, which includes recording Indigenous knowledge in digital forms as well as immigration history. This is a particularly important area for digital humanities in Australia, given its cultural and linguistic diversity.

### 6. Digital Humanities at the University of Western Sydney

Many institutional models are available for supporting digital humanities research and teaching in institutions. Some of the projects and activities referred to above have been initiated or are maintained by libraries and other collecting institutions, but the majority are from university research centres. A formalised institutional focus on digital humanities is not as common within universities in Australia as it is in North America, Europe, and increasingly in Asia. We have the opportunity to learn from and follow the most successful international models to introduce digital research and teaching more widely into our institutions.

In the past decade there has been a broad range of digital research activities...
at the University of Western Sydney across Institutes and Schools, and in 2012 the University approved the formal establishment of a university-wide Digital Humanities Research Group (DHRG). The group brings together researchers, practitioners, and professional staff across disciplines to focus on how computational media can open up new avenues of inquiry in digital humanities and social sciences, enabling richer understanding of complex social, cultural, economic, and environmental issues.23

With a membership of over 50, our research program represents one of the largest concentrations of researchers in the interdisciplinary digital humanities and social sciences in Australia. DHRG acts as an advanced research network and a community for those using digital technology in their research, practice, and teaching across all disciplines at UWS, and it connects with internationally respected researchers and institutions beyond the university. The group is based in the School of Humanities and Communication Arts, with strong links to the Institute for Culture and Society; the MARCS Institute; the School of Computing, Engineering, and Mathematics; the School of Social Sciences and Psychology; the School of Education. DHRG works closely with the university’s eResearch team and library.

UWS established Australia’s first Chair in Digital Humanities in 2012. When I took up the position, my key role was to initiate the formation of the Digital Humanities Research Group. Since then there has been a period of intensive activity: a Research and Technical Development Manager and a Senior Lecturer in Digital Humanities were appointed, and staff of the UWS Justice Research Group have joined DHRG to expand the digital justice research focus at UWS within the digital humanities framework. For the past five years the group has had two of the leading international experts in digital humanities, Willard McCarty and Harold Short (both of King’s College London), as fractional professors, advising the program and mentoring staff. With three adjunct academic appointments, and two further visiting professorial staff, as well as a growing group of local and international postgraduate students joining the group, DHRG is a hub of innovative research activity. There is no doubt that the extensive planning and funding that UWS invested into building a digital humanities community from the ground up has enabled the group to have a sense of identity and purpose relatively quickly and to accept digital humanities as their interdisciplinary home base.

It is a sign of the international recognition that DHRG has won, that the global Alliance of Digital Humanities Organisations (ADHO) has agreed to
hold its annual conference at UWS in July 2015. This will be the first time the conference has been held outside of North America and Europe in its 26-year history. DHRG’s successful bid to host this high-profile event for UWS at the Parramatta campus furthers its strategic aim of building digital humanities communities. The theme of ‘Global Digital Humanities’ acknowledges the field’s expansion worldwide across disciplines, cultures, and languages. Through sponsorship arrangements for the conference the foundations are laid for potential collaborative relationships, with supporting organisations including the State Library of New South Wales, the Australian Academy of the Humanities, the Australasian Consortium of Humanities Research Centres, GovHack 2015, the third international Linked Open Data in Libraries, Archives, and Museums Summit (LODLAM).

Since the formation of the DHRG, numerous digital humanities research projects have been initiated and are under way at UWS. Here I will refer to just one, which was nominated for a Vice-Chancellor’s Award in 2014 for professional service to the university. The project is ‘Journal Finder’, led by Dr Jason Ensor in collaboration with the UWS Library. The Australian Research Council (ARC) regularly releases a journal list of approximately 22,000 publications with relevant codes for fields of research used to identify which journals are assigned to which fields. UWS Library engaged with our group to develop a tool that would accumulate both subscribed and openly available metrics information and provide a clear pathway through an otherwise complex task. Developed internally, using open standards, UWS’s ‘Journal Finder’ provides researchers with a portal based on ‘Field of Research’ that aggregates a range of metrics and assists the data-driven decision-making process. Created over a period of four months, the relatively simple system has attracted the attention of the university community. It has streamlined key library services and, just as importantly, it has raised the profile of the library and its collections as key stakeholders in the research process. ‘Journal Finder’ is also being supplemented now with various kinds of visualisations that show where the research strengths of each Australian university lie and in which journals their academic staff publish.

7. Conclusion

The common theme that runs through the initiatives I have referred to is the importance of building communities of interest and practice in digital humanities, whether they are on an institutional, regional, or global scale. Due to the collaborative nature of digital humanities projects, the building of
effective frameworks for teams is often vital to their success. While individuals can pursue research in this field, coordinated activities bring greater benefits, with some kinds of digital projects unable to proceed without the expertise of multidisciplinary teams, and managing these may require a higher degree of support than for traditional humanities projects. In one sense, digital humanities is akin to any targeted research area that seeks to gain strength by building teams and critical mass, but there is one important difference. In digital humanities the need to bring together technical experts and traditional humanities scholars means that many projects require an unusual degree of collaboration across unfamiliar boundaries. Whereas boundary crossing between technical and nontechnical disciplines has become commonplace in areas such as film, visual arts, and media more generally, there are still areas of humanities research where technology is rarely engaged, either theoretically or in practice in the sense of collaboration in a shared project. In such cases, digital humanities have the potential to provide a research environment that can stimulate new ideas and reorient projects towards the digital through collaboration.

Setting up collaborative structures may appear to be a straightforward process, but in practice it can be complicated. Collaboration can take different forms in different settings and for different projects. Even at the stage of initially defining the project, people from different areas are likely to have views that diverge, and negotiation is required to integrate ideas and people towards a common purpose. Digital projects do not always have neat boundaries, like those of a book. The difficulty of establishing limits raises other kinds of questions that are important for academic researchers, such as: What is a publication in the digital humanities context? How will success be measured both as the project progresses and in terms of a final output, and do new kinds of criteria need to be developed? With few external measures beyond crude tracking of website utilisation and user behaviour, it is usually the case that projects use their own self-defined objectives as the mechanism for assessment, and these can be self-fulfilling. However, there are initiatives in train or on the horizon to help address the issue of evaluation of projects and their impacts. DHCommons, the journal of centerNet, for example, is allowing for peer review of projects and reports on their developments at mid-stage.24

If I had to make one summary comment on the digital future of humanities research, I would make the argument, as I have done in a number of published articles, that the true challenge in the digital arena is in fact not technical; it is the human challenge of changing established ways of approaching research, and that requires a cultural shift. It involves much
more than moving away from the idea of the solitary worker towards collaborative approaches in their many forms, as outlined in this paper; it involves embracing the new methods enabled by technologies through all aspects of a project life cycle. It requires a recalibration of ways of working as well as institutional structures to support this new work. Most of all it will require being open to different ways of seeing, listening, searching, and learning. This in turn will lead to changes in the utilisation of the tried-and-true tools of research in the humanities, such as narrative, primary documents, photography, statistical analysis, and even memory itself. Now, as digital technologies penetrate every aspect of our lives, changing the way we live and experience the world, and as digital humanities increasingly enters the research mainstream, we are at an exciting and pivotal moment in the history of the evolution of the humanities.
Footnotes


5. My view that the Australian experience has been similar to that of other countries that were in the process of building their digital humanities communities is based on numerous discussions at conferences and committee meetings of the Alliance of Digital Humanities Associations over the past five years.


7. See the recent book Defining Digital Humanities that collects essays from the past decade to address the definitional issues: http://www.ashgate.com/isbn/9781409469636.


13. Australia has state governments that contribute towards specific projects, and industry also contributes, but the national (federal) government is the major source of research funding.


16. This follows the earlier formulation of the concept of a methodological commons in digital humanities research by Willard McCarty and Harold Short.


21. A number of New Zealand and Pacific projects were also featured, such as Ceismic, Digital NZ, and the Online Dictionary of Cook Islands languages.

22. I’m pointing here to the list of planning documents for digital humanities on the digitalhumanities.org website, put together by Lynne Siemens.

23. The Digital Humanities Research Group welcomes new members, including those aligned with other UWS institutes, schools, centres, and groups. DHRG members work collaboratively to address complex research challenges drawing on a very wide range of digital technologies and techniques. A key function is to foster and support the interdisciplinary collaboration that is central to digital humanities research. The group also provides a framework for cooperation across organisational units, supporting the university’s Strategic Plan. Our research program is guided by the following core principles: Academic excellence; Collaboration—interdisciplinary, inter-institutional, international; Engagement—local, national, and global; High ethical standards; and Alignment with UWS Mission and Goals.