Australian Academy of the Humanities’ 2nd Humanities, Arts and Culture Data Summit

and

3rd international DARIAH Beyond Europe workshop

27-29 March 2019
National Library of Australia, Canberra
We create digital tools to explore academic research in new ways.
My approach to digital research


- Digital humanities need to be understood in the context of ‘the digital modern’.
  - Reflexive Modernity (Anthony Giddens et al).

- We need to develop critical theories that can help us both understand digital media & culture and build working digital tools / products.
  - Postphenomenology (Donald Ihde, Peter-Paul Verbeek et al).
The longue durée of machine epistemology

The Antikythera mechanism (Fragment A – front), 150-100 BC.

The IBM Blue Gene/P "Intrepid" supercomputer, Argonne National Laboratory.

Amazon Echo ‘AI’ assistant.
• Laboratories are key sites in the construction of knowledge, and hence meaning.
• Scientists worked out what they are, and how they work best, 100 years ago.
• Humanists and social scientists are still working that out. The better we understand it, the better our labs (and the knowledge & meaning they produce) will be.


Molecular Biology Technics Laboratory at Faculty of Biology of Adam Mickiewicz University in Poznan (Wikipedia).
We must not only search for, and procure a greater number of experiments, but also introduce a completely different method, order, and progress of continuing and promoting experience. For vague and arbitrary experience is (as we have observed), mere groping in the dark, and rather astonishes than instructs. But when experience shall proceed regularly and uninterruptedly by a determined rule, we may entertain better hopes of the sciences.

Francis Bacon, *Novum Organum*, 1620.

Ivanka Trump in the lab, 2018. Meme by @MaryViglione.
Established late 2015.

Supported by external funding, under-written internally.

12 permanent staff: Director, Deputy-Director, Project Manager, 3 Analysts, 4 Software Engineer, 2 UI/UX Developers, 1 Systems Manager. 1 contract analyst. Research Affiliates / Visiting Fellows.

2015: 1 woman, 6 men; 2019: 5 women, 8 men.

9 countries of origin, 7 languages.

~200 virtual machines, ~1TB RAM, ~45TB data; ~100 inherited projects, 20 ongoing. ~5 million digital objects.
King's Digital Lab

Digital Cultural Heritage

http://romanrepublic.ac.uk/

http://www.chopinonline.ac.uk

OCVE Online Chopin Variorum Edition

http://www.aemap.ac.uk

http://germanscreenstudies.eu

Australian Academy of the Humanities second annual Humanities, Arts and Culture Data Summit and third international DARIAH Beyond Europe 27-29 March 2019
Agile Software Development & Maintenance Life-cycle

**Initial Contact**
Partner gets in touch with their project idea.

**Internal Assessment**
We review whether the project would be a good fit for KDL.

**Requirements Assessment**
We discuss requirements with the partner and produce a product quote.

**Evolutionary Development**
Focused on communication, collaboration and flexibility as we develop the project in increments.

**Kick Off**
If funding is approved, we confirm how we’ll work with our partner.

**Funding Application**
If needed, we assist with incorporating KDL’s involvement in the application.

**Deployment**
In stages, after each increment, allowing for regular testing and refinement in each development/deployment cycle.

**Release**
The partner signs off a Service Level Agreement and the project goes live.

**Post Project**
Ongoing hosting and maintenance for a set period under the terms of the Service Level Agreement.
## Agile Software Development & Maintenance Life-cycle

### Projects

See everything that you and your team are working on.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Status</th>
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<tbody>
<tr>
<td>AHRC Archiving &amp; Sustainability</td>
<td>for KCL: Policy Institute</td>
<td>Active 2 months ago</td>
</tr>
<tr>
<td>Applying AI to storytelling</td>
<td>for ASAH: Culture, Media and Creative Industries</td>
<td>Active Recently</td>
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<tr>
<td>Audiences of the Future: To Play F</td>
<td>for King's Digital Lab</td>
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<td>BBC Monitoring Archive</td>
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<td>CRISP: Crisis Response Information</td>
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<td>DigitC Creative Hub</td>
<td>for AHR: History</td>
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<td>GPP: Georgian Papers Programme</td>
<td>for External: Royal Household</td>
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<td>H2020: Moving Cultures</td>
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<td>INTSYS: IT Core Systems</td>
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<td>Jordan: Cultural Heritage &amp;</td>
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<td>Sustainable Development Workshop</td>
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<td>KCL Archiving and Sustainability</td>
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<td>for King's Digital Lab</td>
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<td>KCL Communication strategy</td>
<td>for King's Digital Lab</td>
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<td>KCL Consultancy</td>
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<td>Active 1 month ago</td>
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<td>KCL Funding strategy</td>
<td>for King's Digital Lab</td>
<td>Active Recently</td>
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<td>KCL: King's Digital Lab</td>
<td>for King's Digital Lab</td>
<td>Active Recently</td>
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<tr>
<td>KCL: Solution Development Team</td>
<td>for King's Digital Lab</td>
<td>Active Recently</td>
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<tr>
<td>Knowing culture: Ideas, cultural</td>
<td>for External: University of Exeter</td>
<td>Active Recently</td>
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<td>knowledge, and networks of practice in Britain, c. 1800-1950</td>
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<td>OEO Ogilvie</td>
<td>for External: Oxford University</td>
<td>Active 1 month ago</td>
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What is a digital humanities lab, and how might we try to understand them?
A socio-technical system

History of Technology (engineering / materialism / historicism).

Social Studies of Science (constructivism, tacit knowledge, ethnography).

Post-phenomenology (the entanglement of humans and things).

Epistemology (the nature of Truth, the process of knowledge creation).
What should we be looking for in these ‘socio-technical systems’?


To restore the contextuality of science, we have had to go into the laboratory and observe the process of knowledge production. In view of the opportunistic logic we found at work in this process, "scientific method" can be seen as a locally situated, locally proliferating form of practice, rather than a paradigm of non-local universality. It is context-impregnated, rather than context-free. And it can be seen as rooted in a site of social action, just as other forms of social life are.


So engineers and philosophers, each in their own way, struggle with the role of physical structures and human intentions in explicating what it means for a technical artifact to have a function.
“...technology alone cannot make problems doable. Doability is better conceptualised as the alignment of several levels of work organisation.”

Conclusions

Digital laboratories imply ethical as well as epistemological and methodological load:

• Ethical duty to continue the humanities tradition as traditionally conceived.
• Ethical duty to avoid the replication of inequities of tech-sector culture.
• Ethical duty to manage our financial responsibilities transparently – and perhaps even aim to profit - in consciousness of the opportunity costs for our colleagues.
• Epistemological duty to safeguard but also extend the modes of knowledge creation and interpretation open to humanities researchers in a manner in keeping with the humanities tradition.
• Methodological duty to be experimental and innovative – and embrace the possibility of failure – but also transparent.
• An epistemological / methodological duty to embrace the full spectrum of ‘meaning construction’ in the humanities, from ‘deformance’ (Samuels & McGann) to empiricism.