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Tide Prediction Machines, Prosopography and Digital Humanities: what are they and how do they fit together?

Helen Mair Rawsthorne

► **To cite this version:**

Helen Mair Rawsthorne. Tide Prediction Machines, Prosopography and Digital Humanities: what are they and how do they fit together?. DARIAH Annual Event 2019, May 2019, Warsaw, Poland. , 10.5281/zenodo.2908249 . hal-03016491

HAL Id: hal-03016491

<https://hal.science/hal-03016491>

Submitted on 21 Mar 2024

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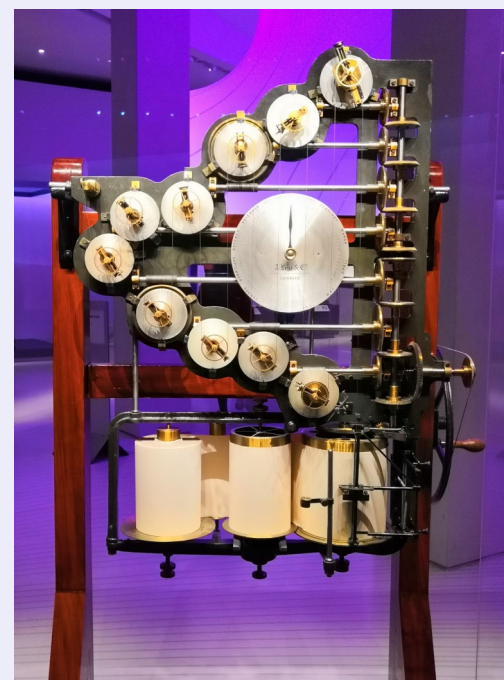
Master's candidate

Cultural history of science and technology,
digital humanities and mediation
François Viète Centre of Epistemology and
the History of Science and Technology
Brest, France



Tide Prediction Machines

- Analogue computers for calculating predictions of times of high and low tides
- Preceded by long calculations by hand, succeeded by digital computers
- First operational tide prediction machine constructed in London in 1873
- 25 out of 33 machines ever built constructed in UK
- Many machines exported; used worldwide



British Tide Predictor No.1, built in London in 1873, now on display at London Science Museum. Photograph taken by H. M. Rawsthorne on 02/02/19.



Bidston Kelvin machine, built in Glasgow in 1924-25, now at SHOM site in Brest (France). Photograph taken by H. M. Rawsthorne on 18/12/18.



Doodson-Légé machine, built in London in 1950, now on display at NOC site in Liverpool (UK). Photograph taken by H. M. Rawsthorne on 15/01/19.

A New Wave of Prosopography: an Application to Tide Prediction Machines

THE PROJECT

- Study lives of tide prediction machines by doing a prosopography of them
- Analyse use and impact of tide prediction machines
- Investigate status of machines today
- Make it easier to tell the story of lives of tide prediction machines

THE QUESTIONS

- Can prosopography successfully be used to study a group of artefacts?
- How can digital humanities tools be used to facilitate a prosopographical study?

Prosopography

- Research method usually used to study lives of groups of people
- Overcomes problem of scarcity of historical data by collecting together all available fragments and analysing them, thus compensating for gaps in the data
- Highlights particular characteristics representative of chosen group
- Focuses on the general and average instead of the exceptional and unique

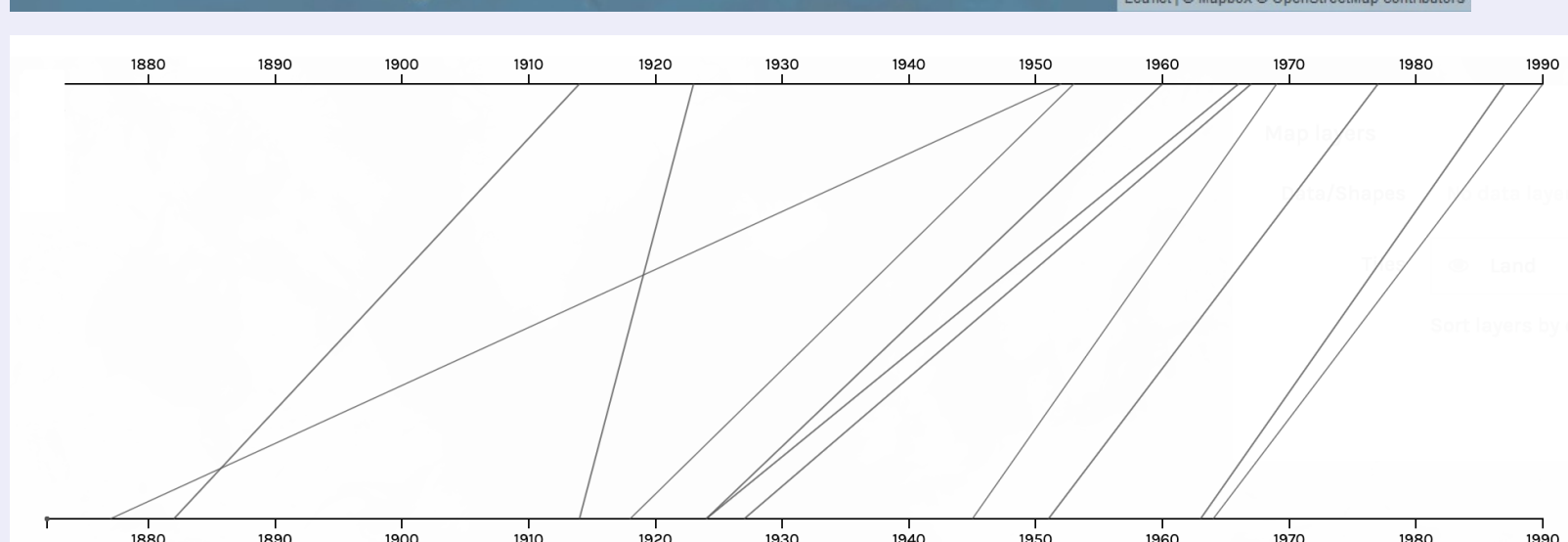
Use of digital humanities

THE DATA

- Most data is temporal and geospatial (dates and locations of manufacture, operation, decommissioning, etc.)
- Some numerical data (number of constituents on machines, cost of machines, etc.)
- Some textual data (names of machines, manufacturers, etc.)

Palladio (right)

- Map (right) shows journeys made by tide prediction machines during their lifetimes, from manufacture location to operation location
- Timespan (below, right) shows lifetimes of tide prediction machines
- Different visualisations uncover patterns previously hidden in data

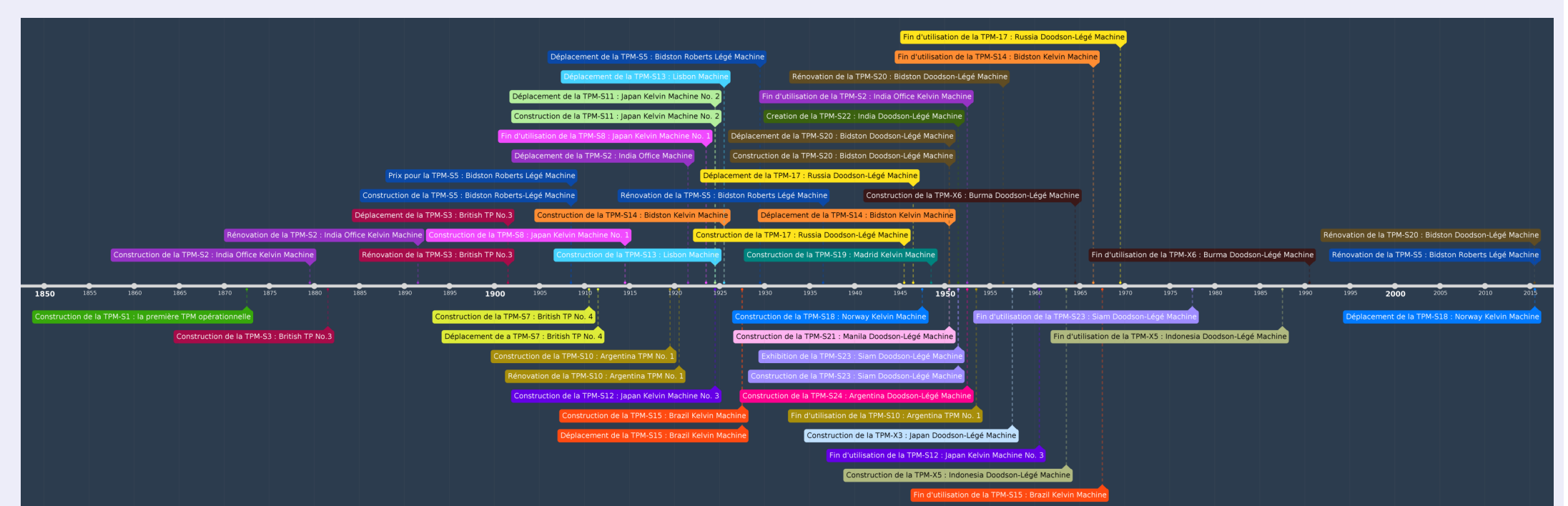


WHY DH TOOLS?

- Storage and management
- Association and analysis
- Visualisation and interpretation
- Presentation and diffusion

WHICH DH TOOLS?

- Zotero (bibliography management)
- CmapTools (mind map creator)
- Palladio (complex data visualiser)
- Time.Graphics (timeline creator)
- Hypotheses (blog platform)
- Twitter (social network)
- Overleaf (Latex editor)



Time.Graphics (above)

- Timeline shows significant dates of tide prediction machines built in UK: manufacture date, displacements, renovations, prizes awarded and decommissioning
- Each individual machine assigned different colour to aid identification on timeline
- Interpreting and comparing data easier with colourful and visual representation

Acknowledgements

With thanks to my project supervisor Sylvain Laubé, also of the François Viète Centre (Brest, France), for his continued support. Thanks also to National Museums Liverpool (UK), the National Oceanography Centre (Liverpool, UK) and the French Naval Hydrographic and Oceanographic Service (Brest, France) for giving me access to their archives and their tide prediction machines.

Poster designed by Helen Mair Rawsthorne for display at the DARIAH Annual Event 2019 in Warsaw (Poland), 15-17 May 2019. All images licensed under CC BY 4.0.



Helen Mair Rawsthorne

Winner of DARIAH's DH methods and tools blog competition 2019

✉ helen.rawsthorne@gmail.com

🐦 @hmrawsthorne

🌐 /in/helen-mair-rawsthorne

📄 /author/helenrawsthorne